

DOCUMENT RESUME

ED 171 460

EC 011 372

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 TITLE Primary Education in the Rural Villages of Pakistan. 1976-1977.
 SPONS AGENCY Ministry of Education, Islamabad (Pakistan). Bureau of Educational Planning.
 PUB DATE Jan 77
 NOTE 190p.; Parts may be marginally legible due to light print
 EDRS PRICE MF01/PC08 Plus Postage.
 DESCRIPTORS Attendance; Developing Nations; *Dropout Research; Economically Disadvantaged; Educational Administration; Educational Experiments; Educational Facilities; *Educational Improvement; Educationally Disadvantaged; National Surveys; *Primary Education; Program Coordination; Research Design; *Rural Development; Rural Dropouts; *Rural Education; Rural Population; Rural Schools; School Community Relationship; *Womens Education
 IDENTIFIERS *Pakistan

ABSTRACT

Data collection from 25 school districts throughout Pakistan and subsequent educational experiments in selected villages highlight 1976-77 research to identify causes of primary school dropout and to suggest primary education improvements to benefit Pakistan's rural poor, especially women. In the 416 villages studied only 1/3 of the total primary age population and 1/4 of the girls attend school, although certain provinces have consistently higher attendance than others. After their first year, nearly 50% of the girls and 40% of the boys drop out because of expense, parental attitude or illiteracy, lack of interest, illness, inadequate facilities, or purdah. Dropouts consistently rate lower on tests for personality, family and school success factors, skills, and knowledge. Attendance, the most significant barrier to expansion of the primary education system, could be improved by: inexpensive, locally acceptable solutions; reorganized administration; Ministerial cooperation; teacher aides; and reinforcing village development in general. Any educational improvement program coordinating school and non-school village factors with other village resources is likely to succeed. Educational experiments reflecting the conclusions are being conducted in 16 villages; more are planned. The extensive annexes and appendices contain detailed funding calculations for a proposed primary education project and a detailed project description. (SB)

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Primary Education In The Rural Villages of Pakistan

BEPM

1976-1977

RC011372

PRIMARY EDUCATION IN THE RURAL
VILLAGES OF PAKISTAN, 1976-77

BUREAU OF EDUCATIONAL PLANNING AND MANAGEMENT
MINISTRY OF EDUCATION
GOVERNMENT OF PAKISTAN
ISLAMABAD

JANUARY 1977

ACKNOWLEDGMENTS

Due to the quantum and complexity of information involved in conducting Educational research at the national level a great deal of time, effort, patience and cooperation are required. Thousands of persons have been directly involved in this study. The authors wish to acknowledge the direct and indirect assistance of the following officers and individuals :

1. Capt. U.A.G. Isani
Additional Secretary
2. Dr. Tahir Hussain
Joint Secretary
3. Mr. Ashraf Qureshi
Joint Educational Adviser
4. Dr. Khalid Hassan Bokhari
Deputy Educational Adviser
5. Dr. Abdul Aziz Khan
Deputy Educational Adviser
6. Dr. Ijaz Ahmed Chaudhry
Assistant Educational Adviser
7. Dr. A. Ghafoor
Assistant Educational Adviser
8. Mr. Mirza M. Musheer
Assistant Educational Adviser
9. Mr. Makhmoor Ahmed Goheer
Assistant Educational Adviser

10. Mr. Akmal Beg
Assistant Educational Adviser
11. Mr. Fayyaz Ahmed
Education Officer
12. All Secretaries of the Provincial
Education Departments
13. Mr. G. M. Shah
Deputy Director of Education
Federal Capital Territory
14. The Staff of Colleges of Education
Institutes of Education & Research and
Provincial Education Departments
15. The Staff of the Bureau of Educational
Planning and Management
16. Students of the Quaid-e-Azam University,
Islamabad

In addition, a number of key persons associated with the United States Agency for International Development (USAID) have been extremely helpful in making this study possible. These include :

Mr. Joseph C. Wheeler, Director
Dr. Harold Freeman, Assistant Director
Mr. Charles D. Matthias, Assistant Director
Mr. James D. Murray, Education Officer
Mr. Musharraf Ali, Education Adviser

Further, the help and cooperation extended by the following members of the Primary Education Project Committee is highly appreciated :

Mr. Arthur M. Handly

Mr. John A. Tennant

Mr. Arthur S. Lezin

Mr. Edmund L. Auchter

We are grateful for the assistance rendered by Mr. Akhtar Qureshi and Mrs Rehana Mirza Rizki in the production of this report.

It has been a pleasure and a privilege to work with all of the foregoing persons in the accomplishment of this research.

Saeed Ullah Shah

Jefferson N. Eastmond

B.E.P.M., Islamabad

January, 1977

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INTRODUCTION

It has been a great privilege, a pleasure, and in my judgment a sacred trust to work in Pakistan. I am enthusiastic about the work and humbled by the overwhelming challenge and opportunities to improve the educational opportunities -- the lives -- of the young people of this great country.

This document, together with the Appendix volume, is a final report on my 12-months work in Pakistan. I would like to have it seen as an accountability document, that is, a statement of what was actually accomplished in terms of the original contract and the P.R.P. (Project Review Paper). In citing the research accomplished and the detailed studies underway, it is pointed out that all of the basic data and all of the tabulated summaries are on file at the BEPM (Bureau of Educational Planning & Management).

A. Scope of Work Completed

Contractor has performed the following duties :

1. Served as general consultant to the Ministry of Education (MOE) in all matters related to project development, including but not limited to the areas of education research, planning and finance. (See Parts I through IV of Appendix)

2. Provided guidance to Bureau of Educational Planning and Management (BEPM) of the MOE on both Cross-sectional and longitudinal

studies related to the causes of dropouts, including both guidance in the conceptual formulation of hypotheses and in the statistical design of studies. (See Part IV herein and Figure 1 in Section IV of the Appendix).

3. Assisted BEPM with design, implementation, and analysis of studies to determine (a) number and optimal location of schools to be included in project, (b) province-specific nature of educational programs to be developed in the schools, and (c) costs per school. (See Part VI herein).

4. Assisted the BEPM in the determination of human, financial and organizational resources required to carry out the project, including an assessment of administrative capabilities, management info systems and planning capacities at both the federal and provincial levels. (See Studies underway, Part IV, and Parameters of the Project Proposals, Part VI herein).

5. Recommended to the MOE and USAID, the U.S. assistance requirements during the life of the project, taking into account plans and programs of other donors. (See Part VI, herein).

6. Assisted BEPM and USAID in the preparation of the project paper including the development of project performance indicators. (See Part VI, herein).

B. Reports Submitted

1. A quarterly progress report has been submitted to USAID within 30 days after each quarter was completed, indicating action taken, problems encountered, progress to date, and plans for the next reporting period. These plans have been consistently approved and for the most part carried out on time.

2. Contractor has also provided such reports as USAID and/or the Government of Pakistan required, including training manuals, An Interim Progress Report, and this final report with appendix.

A detailed account of the specific findings and research efforts directed by the Project Review Paper are cited in the Annex, herein.

JEFFERSON N. EASTMOND
RESEARCH DESIGNER

I. RESEARCH DESIGN AND TIME TABLE

These research efforts toward the improvement of primary education in rural Pakistan has consisted of the following activities which have been carried out within the approximate times shown :

February, 1976 :	Formulation of data collection instruments Designed needs assessment and village planning model.
March - April :	Field test of data collection instruments Pilot try out of needs assessment and village planning model.
May - June :	Published data collection instruments and training manuals for field workers Conducted training sessions in 25 districts throughout Pakistan Collected data from a nation-wide sample of 416 rural villages.
July - August :	Tabulated village data with preliminary summaries.

- September : Data analysis and further tabulation
 Published Interim Report
- October : Held policy meeting
 Set up experiments in selected villages
 of the Federal Capital Territory
- November-December: Held national meeting. Contracted out
 a number of research studies.
 Held conferences with provincial secretaries
 and officials of the provincial education
 departments in each province and in
 selected districts.
 Set up experiments in the Federal Capital
 Territory and in the Sind.
- January, 1977 : Contracted out additional studies.
 Set up experiments in selected villages
 in the Punjab and in N.W.F.P.
 Published annual report on the research.

The foregoing list of research activities summarizes in a very brief way what was done, the elements of the research design used, and the timetable of activities. A more complete description of the purpose and objectives of the study (Part I), its background and scope (Part II), underlying assumptions (Part III), and the strategy and research design used (Part IV) are presented in Appendix of this report.

II. HIGHLIGHTS OF THE FINDINGS FROM THE NEEDS ASSESSMENTS AND THE NATIONWIDE COLLECTION OF DATA

A vast amount of data and a considerable amount of village experience and insight has been gleaned from this research effort thus far. It has yet to fulfill completely its basic research design. From the research thus far completed it is possible to report what appears to be some major findings or conclusions that emerge from the data. Much more detailed analyses are yet to be done on the data collected to date.

From the data collected thus far, approximately 100 studies warrant publication and further development. These could cover separately every one of the 25 districts and represent each province. Some could also be nation-wide in scope on a wide variety of topics (See Appendix, Part IV). Such research can well provide directions for primary education in Pakistan for the next 5 to 10 years.

The highlights of the research reported herein are presented in relation to patterns of primary school attendance, reasons for pupil dropout or nonattendance, and a comparison of characteristics of pupils who dropout with those who stay in school.

A. PATTERNS OF PUPIL ATTENDANCE

In the nation-wide sample of villages, each participating District Education Officer selected a stratified sample of sixteen villages with boys schools and girls schools. From the information obtained and from census and other estimates of the population of each village, the percentage of the school age population in attendance at primary schools was calculated. These data are presented in Table I for each province, the Federal Territory and for all of Pakistan.

=====

TABLE I

PUPIL ATTENDANCE IN RURAL VILLAGES WITH PRIMARY
SCHOOLS IN PAKISTAN; BY PROVINCE, 1976

<u>Sex of Pupils</u>	<u>Percent of the School Population in School</u>					
	<u>NWFP</u>	<u>Baluchistan</u>	<u>Punjab</u>	<u>Sind</u>	<u>Islamabad</u>	<u>All Pakistan</u>
	(%)	(%)	(%)	(%)	(%)	(%)
Male	45.4	26.4	53.6	50.2	50.6	45.4
Female	15.8	12.6	39.2	22.0	34.8	24.6
All Pupils	30.6	19.5	46.4	36.1	42.7	35.1

=====

From the table it can be seen that approximately one-third of the primary school age group is attending school in villages with schools. Only one girl in four attends. Among the provinces, the

Punjab has the highest percentage of boys and girls in schools and Baluchistan has the lowest.

It should be noted here that the percentage shown in Table I are high when considering all of rural Pakistan, since the data covers only villages with boys and girls schools. It does not include villages that have only a boys school, of which there are many, nor does it include villages wherein no school exists, again a considerable percentage. The author's estimates, based on village experience and some school mapping studies still in process, are that less than 40 percent of rural primary school age boys attend and less than 15 percent of the age group of girls attend school.

A more detailed description of attendance patterns by sex, class level, and province for villages with schools is presented in Table II.

TABLE II

PRIMARY SCHOOL ATTENDANCE IN PAKISTAN
RURAL VILLAGES WITH SCHOOLS BY SEX,
CLASS LEVEL, AND PROVINCE, 1976

	NWFP	Baluchistan	Punjab	Sind	Islamabad	All Pakistan
BOYS						
Class I	89%	60%	71%	81%	87%	78%
II	45%	25%	57%	52%	49%	46%
III	48%	18%	53%	45%	44%	42%
IV	22%	15%	46%	40%	39%	32%
V	23%	14%	41%	33%	34%	29%
All	45.4%	26.4%	53.6%	50.2%	50.6%	45.4%
Total Classes						
GIRLS						
Class I	34%	37%	70%	40%	75%	51%
II	16%	10%	43%	24%	42%	27%
III	12%	8%	38%	21%	28%	21%
IV	11%	4%	25%	15%	16%	14%
V	6%	4%	20%	10%	13%	10%
All	15.8%	12.6%	39.2%	22%	34.8%	24.6%
Total Classes						
BOYS AND GIRLS						
Class I	61.5%	48.5%	70.5%	60.5%	81.0%	64.4%
II	30.5%	17.5%	50.0%	38.0%	45.5%	36.3%
III	30.0%	13.0%	45.5%	33.0%	36.0%	31.5%
IV	16.5%	9.5%	35.5%	27.5%	27.5%	23.3%
V	14.5%	9.0%	30.5%	21.5%	23.5%	19.8%
All	31.0%	19.5%	46.4%	36.1%	42.7%	35.1%
Total Classes						

From Table II it can be seen that by far the largest drop out of pupils occurs between Classes I and II, where nearly 50 percent of the girls and 40 percent of the boys leave school. The differences among provinces are noteworthy, particularly in Baluchistan and the N.W.F.P. where only about 5 percent of the girls continue to Class V.

This disparity in school attendance between the provinces of NWFP and Baluchistan in comparison with the Punjab and Sind is strikingly similar to the qualitative scores obtained on all formal and all nonformal aspects of education. These detailed scores are presented in Part V of the Appendix and they show Sind and the Punjab to be highest in most of these measures and Baluchistan consistently lowest.

The data in Tables I and II define many of the parameters of the problem to be met in universalizing primary education in rural Pakistan. Additional school mapping studies are acutely needed.

Table III presents an age-grade table of the boys in attendance in rural primary schools of Pakistan. Table IV presents a similar table for girls.

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TABLE IV

BOYS AGE-GRADE ATTENDANCE TABLE
FOR ALL PAKISTAN, 1976

AGE IN YEARS										
Classes	5	6	7	8	9	10	11	12	13-15	Total
I	7344	5018	1859	447	208	87	40	49	2	15054
G R A D E II	4	2664	4148	1733	451	129	52	47	5	9233
III		5	2181	3291	1789	580	131	57	1	8035
IV			78	1593	3069	1671	552	201	11	7175
V				68	1098	2174	1558	527	24	5449
VI					6	109	313	191	1	620
Total :	7348	7687	8266	7132	6621	4750	2646	1072	44	45566

PERCENTAGES

AGE IN YEARS

Classes	5	6	7	8	9	10	11	12	13-15	Total
I	161	110	41	10	5	2	1	1	-	331
G R A D E II		59	91	38	10	3	1	1	-	203
III			48	72	39	13	3	1	-	176
IV			2	35	67	37	12	4	-	157
V				1	24	48	34	12	1	120
VI						2	7	4	-	13
Total :	161	169	182	156	145	105	58	23	1	1000

-: 9 :-

TABLE V
GIRLS AGE-GRADE ATTENDANCE TABLE
ALL PAKISTAN, 1976

AGE IN YEARS

Classes	5	6	7	8	9	10	11	12	13	Total
I	4481	3398	1599	607	193	47	35	23	-	10383
II	6	1340	1718	1272	503	170	70	34	2	5115
III		19	908	1343	985	611	186	94	5	4151
IV			170	699	1009	736	436	166	19	3235
V			1	50	624	719	600	434	50	2478
VI					22	30	56	43	12	163
Total :	4487	4757	4396	3971	3336	2313	1383	794	88	25524

PERCENTAGES
AGE IN YEARS

Classes	5	6	7	8	9	10	11	12	13	Total
I	176	133	63	24	8	2	1	1	-	408
II		52	67	50	20	7	3	1	-	200
III			36	53	39	24	7	4	-	163
IV			7	27	40	29	17	7	-	127
V				2	24	28	24	17	2	97
VI						1	2	2	-	5
Total:	176	185	173	156	131	91	54	32	2	1000

III. REASONS FOR PUPIL DROPOUT AND NONATTENDANCE

Documenting the extent of pupil dropout or non-attendance and its variations among the provinces in terms of sex and age is a good start in defining the problem. Another essential step was to probe in a number of ways to find out the reasons or explanations of these non-attendance patterns. This study attempted to get at reasons or causes of dropout and nonattendance in a variety of ways. First it, attempted an indepth study of the status and aspirations in four different types of villages. This was referred to as a needs assessment. Next a tabulation was made of reasons for drop out and non-attendance given by the data collection and interviewing research teams for each village covered in the national survey. In addition, the opinions of drop out pupils, their parents, and their teachers were analyzed for explanations of dropout and its causes.

Recognizing that the foregoing attempts to discover reasons for drop out are opinion-based, an attempt was made to also gather empirical, non-opinion kinds of documentation. This consisted of examining correlations of pupil attendance with a number of variables such as the kind of curriculum, the type of school building, teachers, etc. And lastly an attempt was made to examine and compare the characteristics of matched pupils,

some of whom had dropped out and some who had stayed in school. The finding of each these efforts is presented in the remainder of this Chapter.

1. Clues to Pupil Drop Out gained from the Needs Assessments

In the spring of 1976 four pilot villages were studied in-depth to assess the critical needs of these villages. The needs were defined by separate male and female committees in each village as they articulated their aspirations in relationship to the realities of their villages. Part VI of the Appendix presents the details of these needs assessments, but an overall tabulation of the critical needs defined is presented in Table V.

TABLE V
**RESULTS OF THE NEEDS ASSESSMENTS IN FOUR
VILLAGES IN THE FEDERAL CAPITAL TERRITORY,
1976**

NEEDS	CHIRAH	GONGOL	PIND BEGWAL	TARLAI	TCTAL
Moral Values	1	1	1	1	4
Health	1	1	1	1	4
Econ. Develop.	1				1
Voc. Skills	1	1	1	1	4
Relig. Knowledge	1		1		2
Literacy (Reading & Write)	1	1	1	1	4
Social Skills		1			1
Citizenship		1			1

The needs identified in Table V were the first documented clues available to give reasons for primary school drop out -- felt deficiencies of the schools -- as well as avenues for solving the drop out problem.

2. Drop Out Reasons in the Judgment of Teacher-
Facilitator Teams

In each of the 416 villages of the national sample, the data were gathered and interviews conducted by a team of four professional educators. Two of these were the headmaster and the headmistress of the village primary schools. The other two were high school or college teacher, male and female from outside the village. At the conclusion of their data gathering, the members of this team were to reflect on all of the information and interviews and come to a consensus of the principal cause of pupil drop out in that village. They were also asked to list other major reasons for pupil drop out in a priority arrangement. The summary of these team judgments for all 416 villages revealed that the overwhelming cause was poverty. Other, less frequently cited reasons were pupils needed for work, parents negative attitude, parent ignorance or illiteracy, inadequate school facilities, poor teachers, etc. The details of this rank order of causes is presented in Table VI.

3. Opinion Reasons for Boy Pupil Drop Out

When male pupil drop outs, their teachers, and their parents were asked the reasons for their not attending school. The highest ranked reasons were much the same : poverty, parents negative attitude, lost interest, illness, unemployment of parent, etc. These are tabulated in rank order in Table VI. Notice how closely they parallel the principal causes and major reasons given by the teacher - facilitator research teams.

TABLE VI

RANK ORDER OF OPINION REASONS FOR PRIMARY SCHOOL
PUPIL DROPOUT AND NONATTENDANCE, PAKISTAN, 1976

Reasons or Cause Given	Teacher-Facilitator Team Decision		Boys Reasons as Reported			Girls Reasons as Reported			Cumulative Total	
	Princi- pal Cause	Other Major Reasons	Pupils Them- selves	Their Tea- chers	Their Pare- nts	Pupils Them- selves	Their Tea- chers	Their Par- ents	Fre- quen- tly	Rank
Poverty (Expenses of Education)	1	1	1	3	1	4	4	3	625	1
Parents Negative Attitude	3	4	-	1	5	1	1	1	293	2
Lost Interest	-	8	2	2	4	2	2	2	236	3
Illness (Parents or Pupil)	7	5	3	4	3	3	8	-	229	4
Unemployment (Parent)	-	-	4	6	2	5	9	4	159	5
Parent Ignorance (Illiteracy)	4	2	-	-	-	-	-	-	153	6
Inadequate Bldgs.	5	6	-	-	-	7	12	6	103	7
Purdah or Pupil Engagement	10	9	-	-	-	6	3	5	98	8
Lack of or Poor Teachers	6	7	-	-	-	13	6	10	86	9
Employment offer	-	-	6	5	6	8	14	8	84	10
Harvest at Exam Time	-	-	7	7	7	11	7	9	72	11
Home Work	-	-	8	8	8	10	10	7	59	12
Unsatisfactory Curriculum	9	12	7	-	-	-	-	-	56	13
Edu. considered irrelevant	8	11	-	-	-	-	-	-	39	14
Pupil Failure	-	13	-	-	-	-	13	12	21	15
Religious reasons	-	-	-	-	-	9	-	13	16	16
Unable to prepare	-	-	-	-	-	-	5	-	13	17
Distance to school	-	-	-	-	-	-	11	11	11	18
Physical defect	-	-	-	-	24	12	-	-	9	19

4. Opinion Reasons for Girl Pupil Drop Out

While the reasons for female pupil drop out given by pupils themselves, their teachers, and their parents had much in common with the boys reasons, there were a number of unique causes cited. Again, the rankings of these reasons are presented in Table VI. Notice that the same factors of parent attitude, loss of interest, illness, poverty, etc., are much the same as boys reasons and those cited by the research teams. On the other hand, such factors as purdah, religious reasons, distance to school, and physical defects are reasons cited only in the case of girls.

5. Empirical Data : Pupil Attendance Relationships to Village School and Nonschool Measures

In each village included in the national survey, the teachers and facilitators were trained to use a rating scale and systematically score some ten aspects of the schools or villages. These resulted in standardized measures of "goodness" or quality of such things as the school buildings, curriculum, village resources, leadership, etc. As these scores were tabulated for each village, district, province and nationally, some very pronounced differences were identified. For example, in the formal aspects of rural primary schools it was found that (a) some provinces score twice as high as others; (b) boys schools were scored consistently higher than girls schools on measures of the quality of school buildings, on school attendance,

and in measures of personnel and administration; (c) girls schools tend to exceed boys schools in the quality of the learning environment (curriculum); and (d) Baluchistan tends to be consistently lowest in all measures and Sind tends to be highest. For the details of these scores and their interpretations, see Appendix, Part V and Data Table in Section A.

Similarly located are the school and village scores on nonformal education and on various community factors. The pronounced differences among the provinces show that (a) scores tend to be consistently low in nonformal education and in (b) village management. That, again, (c) Baluchistan tends to be lowest in all scores, and (d) Sind highest. And that (e) all provinces were consistently low in scores related to motivation, ability, and health which were subsumed under a measure called "personal dynamics".

When correlation coefficients were calculated among all of these scores a number of statistically significant (beyond the one percent level of confidence) and operationally significant relationships were found. Some of the most important conclusions to be drawn from these correlations appear to be : (a) that, nationwide, the quality of the school buildings and facilities was found to have no significant relationship to pupil attendance; that similarly the same could be said about (b) the quality of the school curriculum, and (c) the scores related to school personnel and

administration. And (a) that the only measure consistently related to pupil attendance was a composite of all measures called "total village development". The matrix of these correlations and their statistical and operational significance is presented in Part V of the Appendix. Similar correlation matrices were run separately for girls school and female compilations of scores as well as boys school and male compilations of scores, but no new or unusual relationships were found. Rather, they simply confirmed those calculated jointly.

CONCLUSION : There was an attempt to read meaning into this treatment of the empirical data. Thus, from the analysis thus far of nation-wide data, it appears that improving primary school attendance and curbing pupil dropout can best be met by a coordinated, mutually reinforcing series of village efforts. Thus, a thrust at improving adult attitudes and education, together with similar improvements in nonformal education, school facilities, personnel, curriculum, pupil health and motivation appears to offer the most promising approach. Such a conclusion, of course, needed further verification through additional observations, field work, and some experimentation. The results of such efforts are reported in a subsequent Chapter of this report.

6. Characteristics of Pupils Staying in School in
Comparison with Those Dropping Out

The tabulations of the matched pairs data by sex and class are presented in Data Sheets B of the Appendix. A detailed description of the research design and procedures for this part of the study is presented in the Appendix, Part IV.

The analysis of the matched pairs data produced findings and information that were "too consistent", "too significant", "too uniformly reported to be true". At least that is the judgment of the authors and principal investigators. The data are therefore suspect and need considerable verification and additional field work to make them convincing and show that there were not strong biases in the collection of the interview data.

With that note of caution, the analysis of the matched pairs data showed consistently and significantly that in comparison with those staying in school at every class level the dropout youngsters :

- a) Rate lower on personality and temperament (i.e., health, intelligence, peer relations, social class/caste, self concept, work attitudes, etc.)
- b) Rate lower on family factors (parent attitude toward education, relationship with family, income, stability, etc.)
- c) Rate much lower on school success factors (i.e. attendance, achievement, aspirations, relationship to teachers, etc.)

- d) Rate much lower on skills and knowledge (i.e. read Urdu, read Arabic, write Urdu, add, subtract, multiply, divide). Pupils both in and out of school were found to have a low level of performance in "fix-it-skills" talent development, and handicraft skills.

IV. VERIFYING AND ENHANCING THE UTILITY AND MEANING OF THE NATIONAL SURVEY DATA

Piloting the planning model and then subsequently gathering and analyzing data from a national sampling of villages had allowed a closer definition and documentation of the many dimensions of the problems of primary education in Pakistan. The planning model had given new insights from four villages in the Federal Territory. The need, however, was to broaden the research experience to some kind of sample of villages in each province. More experience was felt to be needed with the dynamics of village primary education in various settings and localities. This additional experience in the villages could also broaden the range of possible solution to problems of primary education in a range of village conditions and under a variety of kinds of provincial administration.

In addition, the analysis of the nation-wide data on primary schools had called into question a number of conventional assumptions about how to quickly improve primary education. For example, in consideration of a total setting, the data seemed to indicate that the isolated improvements of primary school buildings, the quality of teachers, or the school curriculum would not assure better attendance or curb pupil dropout. Again, the opportunity to go back into these national sample and other villages to make further observations, gather additional information, modify or confirm the

findings at hand, and acquire additional insights appeared to be an essential next step. Two basic approaches were used to accomplish. First, a large number of discreet studies would be launched by individuals and institutions throughout Pakistan to add depth and extend the information available and thus modify or verify it in the process. The second would be to conduct a series of on-site surveys on primary schools in a number of rural village in each province. Brief descriptions of the action taken in each of these approaches are presented in the remainder of this Chapter.

A. LAUNCHING INDEPTH AND SUPPLEMENTARY STUDIES :

As a result of the preliminary analysis of the data from the national sample of villages, an overall research design was formulated for additional studies in primary education. This design identified some 85 discreet studies that needed to be carried out and showed their inter-relatedness. The design is presented as Figure 1 in Part IV of the Appendix to this booklet.

A series of efforts have been made to launch a large number of these studies. A number of prominent researchers have been contacted individually. In addition, members of the BEPM staff have discussed with each of the provincial education secretaries and their staffs. Attempts here have been to inform, obtain cooperation, and inquire as to possible interest on the part of professional personnel

in the provinces to undertake one or more studies. Similarly a number of colleges, universities, and I.E.R.'s (Institutes of Education and Research) have been contacted by BEPM staff members to explore the interest and availability of faculty members or graduate students to undertake any of the suggested or related studies. These individuals and institutions have been given photocopies of the data tabulated and summarized by the BEPM and have been invited to submit proposals for studies, with or without the use of BEPM data or suggested outlines. The following paragraphs are a brief report on studies contracted for or under negotiation and those that appear most crucial that as yet prospective researchers are not available.

1. District and Province-wide Studies

Of the 50 districts and territories to be studied in Pakistan, some 25 districts have thus far been involved. The other districts could advantageously become involved and may thus provide further information, interest and confirmation, modification or additional perspectives to the conclusions thus far reached. Moreover, there is a need to take the comprehensive data on a given district or region and further analyze, verify, and extend it and then write it up in such a way that it can be useful to educators and planners interested in improving education in that locality.

Preliminary negotiations are underway with faculty members of the University of Baluchistan to do studies of the districts of Quetta and Sibi. Similarly, a faculty member at the government college in Karachi will study Karachi - Dadu, and the I.E.R. in Hyderabad may take another district in the Sind for study. There is a prospect for a study of the Dera Ismail Khan District to be undertaken by a college researcher residing there.

The most significant of this type of study, however, has been contracted with the I.E.R., Lahore. It has agreed to gather the comprehensive data -- and some additional -- in 3 additional districts; Gujranwala, Kasur, and Bahawalnagar. It will prepare a study of drop outs and related factors for each of these districts and summarize them in one, overall study.

3. Studies Related to Pupil Characteristics

A contract has been negotiated with the I.E.R., Lahore to do a verification and extension of the procedures and data collected with the matched pairs of drop out and stay in pupils. While the data collected will be comprehensive and cover some 14 villages, the published studies will deal only with (a) family factors, and (b) school factors, studies # 80 and # 81, in the research design.

Preliminary negotiations have been made with the National Institute of Educational Psychology to conduct a study on female attitudes and education (#82).

3. Studies on School Personnel, Curriculum,
Buildings, and Management

The following studies have either been contracted or preliminary negotiations are currently underway (the numbers refer to the specifics in the research design presented in the Appendix) :

- #62. Curriculum and Pupil Attendance ... Staff member at the Government College, Karachi
- #63. School Buildings and Pupil Attendance .. Faculty team at the Government College, Karachi
- #70. Characteristics of Primary School Teachers -- Staff member at the Government College, Karachi
"Characteristics of Primary School Teachers in Rural Pakistan with Particular Reference to the Punjab" -- the I.E.R., Lahore
- #86. "A School Building Design to Meet the Needs of Rural Villages in Pakistan" --- Architect in Rawalpindi
- #87. Educational Management in Pakistan, with Particular Reference to the Punjab ... a team from district education offices in the Punjab.

4. Additional Priority Studies

Proposals for studies are still being sought from researchers. In addition to those shown in the research design, the most urgently needed are in the areas of school building utilization; designing in-service training programs for teachers, teacher aides and school administrators; an analysis of age-grade attendance patterns; a school mapping study; the introduction of handicrafts in primary schools, nonformal education programs; changing the educational attitudes of villagers; adult education programs; school health; scholarships and primary school attendance.

B. OBSERVATIONS AND CONCLUSIONS FROM THE ON-SITE VILLAGE SURVEYS

One of the most fruitful and enlightening elements of the entire array of research efforts was the on-site survey of village schools. This was done in connection with the setting up of experiments in a number of villages. Thus, a number of village schools were surveyed and from this number one or more experiments were designed. In the following parts of this Chapter an effort has been made to describe some of the salient observations and conclusions that came from these brief on-site studies of village schools.

1. Observations Constituting a Small National Sample

On-site surveys were conducted in every province and in the Federal Capital Territory. While there was no attempt to make these village schools a random, statistically defensive sampling, nevertheless, the District Education Officers (DECs) were asked to help in the selection of typical villages and to visit the schools with BEPM staff, supervisors, etc. That is, the villages chosen were to be representative in the sense that the major primary problems of the district would be manifest in the schools to be observed.

The following is a listing of the villages wherein all of the schools were surveyed briefly, on-site.

BALUCHISTAN : Three villages of varying size and remoteness within a 15 mile radius of Quetta City.

FEDERAL CAPITAL TERRITORY : (26 villages): Loi Behr, Pihont, Mera Begwal, Shah Allah Ditta, Alipur Farash, Kuri, Jagiot, Khana Dhak, Pind Begwal, Dreggi Mori, Dhok Gangal, Charah, Bhekan Syeden, Sheikhpur, Shakrial, Khana Nai Abadi, Ghagari, Tarlai, Bura Bungyal, Dalyala, Dora-Nau Ghazi, Athal, Lakhwal.

SIND : (5 Villages Karachi District): Koi, Haji Natho Landi, Jam Kando-Landian, Muraad Memon. Biroo, Saudabad.

N.W.F.P. : (4 Villages, Peshawar District): Rajjar, Tangi
Mian Isa, Shab Qadar.

PUNJAB: (6 Villages, Lahore District): 3 suburdan villages
near Lahore, and Muridwala, Dina Nath, Neaz Eeg.

CONCLUSION: While there are perceptible differences in villages
within different provinces, there are vast and prominent differences
within the villages within any one area or district. Each village
is a unique entity and the improvement of primary education in any
given village will be most effective when it can take into account
these differences.

2. The On-Site Survey Objective -- A Problem-Solving Approach

BEPM staff members, in their attitude toward the on-site
surveys, viewed each village as a separate challenge. At the same
time, however, they saw each village as a prototype of hundreds of
villages of the same nature that exist throughout Pakistan. Thus,
the sampling concept was continually kept in mind.

To give a direct purpose to each visit, an objective was
assumed. This objective, in problem form, was : "How can the
boy enrollments be doubled and the girl enrollments be at least
tripled advantageously, using a minimum of resources?" In each
village the visiting team discussed with the local people several
alternative ways to achieve this objective in that particular village.

Posing the various alternative solutions brought reactions from villagers, teachers, administrators and district officers that quickly revealed attitudes, traditions, problems and constraints. The surprising, yet fruitful insight gained through this exercise was that in every village one or more acceptable and feasible alternative solution strategy was found. Furthermore, many of the necessary changes required to reach the specified objective were relatively simple, such as a redeployment of teachers, consolidating schools, mixing some classes, etc.

CCNCLUSION : In nearly every rural village in Pakistan the attendance in the primary schools can be dramatically increased by means of various feasible and locally acceptable solution strategies that require a relatively small amount of resources.

CCNCLUSION : An intelligently designed program of assistance to rural villages that is effectively carried out, can greatly increase the efficiency of the primary schools of Pakistan.

3. Validation of the National Survey Data

Part of the value of the on-site surveys was to allow the BEPM staff to do some small amount of checking and verifying of the data gleaned in the nationwide data collection effort. Some of the data were relatively easy to verify, such as pupil enrollments, teachers assigned, etc. Nevertheless, these data as they were reported were found to be very accurate.

On the more complex or multiple observation elements of the data, perhaps one experience will illustrate the increasing confidence gained by the BEPM staff in the validity and reliability of the nationwide data. In one district, the various scores obtained from the sixteen sampled villages were carefully reviewed with the assistant director. He soon focused on the scores of school building quality -- comprised of some 20 observations -- and began to raise serious doubts about the scores. For example, he knew well every building and he was shocked that some very new structures were related relatively low while others of much older vintage had been given moderately good scores. It seemed obligatory, therefore, to have a BEPM staff member revisit these schools and recheck the observations recorded. This was done in virtually every one of the villages. In the instances of new buildings that received low scores, the scores were verified and the original observers exonerated, because, while the structure may have been new and structurally sound, many other elements such as location, adequacy of the site, lack of amenities, hazardous or distracting influences, etc., accounted for the low scores. Rechecking nearly all of these building scores with on-site visits gave a greater degree of confidence in the data collected in the nationwide survey.

CCNCLUSION : Spot checks on the data collected nationwide appeared to verify them and give increased credence to their validity

and reliability.

4. School Management

One of the most influential in-school elements in the operation of primary schools appears to be management at the local, intermediate, and district levels. Where teachers were assigned, what they thought was expected of them, their punctuality, record-keeping, and many other factors seemed to be directly influenced by the type and quality of school management under which they served. There appeared to be very marked differences in management effectiveness among the various districts visited. However, in each of the provinces one management problem was blatantly obvious, that of dual administration. In these districts there are two district officers; one male for boys schools, and one female for all girls schools.

The lack of cooperation -- even communication -- was obvious between the male and female sectors. Moreover, at the village level the resultant impact of this dual administration is a very significant handicap. It manifests itself in the villages with only one school, which under this pattern of administration, must be either a boys school or a girls school. If it is a boys school, for example, and some girls attend because there is no other school for them, the administration hardly knows how to cope with the situation. The girls are not apparently a part of the male

administrator's responsibility. He may admit them -- or tolerate them -- but he does not go out of his way to encourage them. The same appears to be true if it is a girls school, although a single school for girls in a village is a much more infrequent phenomenon.

In villages where both a boys school and a girls school exist, the same kind of problem arises. Because of school location, teachers, facilities, village feuds or other factors, some girls will want admission to the boys school and visa versa, and the same situation prevails as described above. The problem takes on an even more obdurate dimension if the village wants to mix enrollments or wants to support only one school, because of availability of teachers or other reasons. The administration has frequently been incapable of coping with such a problem and thus blocked its development.

CONCLUSION : A single, unified administration at the district, intermediate, and village levels could do much to improve primary education and upgrade the efficiency of schools in Pakistan. It would require administrative personnel of both sexes and should follow established and proven management principles.

5. School Building Status. Utilization and Design

In villages with both boys and girls schools, about 84 per-
cent of the boys schools are housed in government owned buildings.
For girls, this figure is 70 percent.* At the beginning of the on-site
village surveys there was a challenging conclusion to be dealt with
about the lack of any significant relationship between pupil attendance
and the quality of the school building.

*STATUS OF PRIMARY SCHOOL BUILDINGS IN RURAL VILLAGES WITH BOYS AND GIRLS SCHOOLS, BY SEX AND PROVINCE, 1976

Building Status	Punjab	Sind	NWFP	Baluchistan	Federal Territory	Total All Pakistan
<u>BOYS PRIMARY SCHOOLS -- PERCENT</u>						
Govt. or Comm. owned	90%	78%	83%	82%	86%	84%
Rented	6	18	15	14	14	13
Non Existent	4	4	1	4	0	3
TOTAL:	100	100	100	100	100	100

<u>GIRLS PRIMARY SCHOOLS -- PERCENT</u>						
Govt. or Comm. Owned	80%	75%	51%	60%	64%	70%
Rented	13	17	49	30	9	24
Non Existent.	7	7	0	10	27	6
TOTAL:	100	100	100	100	100	100

As indicated earlier, part of questions about this lack of relationship was answered as the BEPM staff verified the building scores and attendance scores with some checks on the tabulation made on-site. The challenge, however, remained and observations were constantly made to try to refute, verify, or gain some understanding about this lack of relationship. Some of the following observations seem relevant.

It was consistently noted in the on-site visits that, aside from the Sind schools which had ample furniture, the teachers and youngsters were always outside the buildings. It did not seem to matter whether it was a new school building or an old one, the seating pattern outside was always the same. The principal use of the buildings seemed to be storage and a place for safekeeping of papers and materials. Inquiries with teachers and administrators confirmed that the observations were accurate. It appears that most school buildings are used as shelter from rain, or in times of extreme heat, they provide an escape from the direct sunlight. Usually, however, students and teachers in the latter case prefer a nearby tree if a suitable one is available. Examinations of the school building -- even the newer ones -- reveal that there is no artificial illumination, no way to regulate the temperature, and few characteristics that are inviting or conducive

to learning. Obviously, there is need for some indepth studies of building utilization.

Another observation relates to the kinds of structures erected to serve the pressing building needs of a village school. Aside from the storage place provided by a solid building and the boundary wall that appears to be essential in many villages, particularly for girls schools, the shelters erected for use are what can perhaps best be described as sheds. These are made of pole or stone/brick uprights with some kind of roof, usually thatching with poles or sticks. In most observations made thus far, these structures have been consistently utilized even when some rather impressive solid buildings on the same compound were not being used.

Pakistan's villages are changing -- slowly in some cases, but nevertheless changing in attitudes, institutions and other ways related to education. Perhaps there is a need to rethink the need for the costly investment of two solid, long-lasting schools in nearby all villages. As more change comes, it is quite likely that the need may be for only one school with mixed enrollments as there appears to be in many villages even now.

CONCLUSION : The lack of a significant relationship between the quality of school buildings and pupil attendance becomes understandable as one sees how and how often such buildings are used in existing schools.

CONCLUSION :

The need for school building utilization studies is obvious, but based on BEPM's on-site surveys and data, there appears to be a readiness for a better design for school buildings. A tentative surmise would be for some kind of inexpensive combination of a storage-office room that locks and one or more shed-like structures that provide shelter from the severest weather conditions that exist in the seasons when schools are open. An off-hand estimate is that such facilities could be put in place together with boundary wall and essential furnishings for an amount ranging from Rs. 5000 to Rs. 10,000 maximum.

6. Teacher Availability and Effectiveness

The situation with regard to teachers in rural Pakistan is somewhat the same as in other countries. That is, the training centers are located in the urban areas and an adequate supply of teachers are trained. In fact there appears to be a considerable oversupply, with large numbers unemployed in the cities. Such teachers will live and teach in an urban area even if it requires considerable time for riding and then walking daily back and forth to the rural school assigned. For the most part, such transportation must be public and in the case of female teachers, it is advantageous if they can go in pairs for most of the walking. Motorbikes or bicycles would be helpful, but this is not seen as a suitable type of

transportation for a female teacher.

In the rural villages beyond the communication orbit of the towns and cities, recruiting good teachers -- particularly female -- is a challenge. In the nationwide sampling of villages, teachers who did not live in the villages were asked if they would be willing to live there. Most answers were "no". When asked what incentives would be needed to get them to live in the villages, a broad range of answers ranging from adequate housing (most frequently mentioned), all of the amenities such as clean water, sanitary facilities, electricity, etc., to adequate education for their own children, hospitals, good roads, television, etc.

In interviewing women teachers on-site in the rural villages as to their willingness to move into a village, the BEPM staff members have usually been given a flat "impossible" answer. For those who have indicated such a possibility, the alternatives of teacher housing, nearby hostels, additional pay, etc., have been explored. Even if adequate, chaperoned housing were provided with many of the essential amenities, some say they might give it a try, none as yet sampled would be willing to sign a multiple year commitment.

A cursory evaluation of an experimental teacher housing facility provided in Mastung, Baluchistan, indicated that its success is far from assured. Aside from the housing costs, the unit with

only seven teachers requires two minibuses, two drivers, and considerable operating expense. Even the seven teachers apparently view it as temporary. Such costly innovations can, and will, receive more experimentation before wide range adoptions.

Perhaps the most promising possibility uncovered by the BEPM staff in its on-site surveys is the use of a teacher aide. This aide is a woman resident of the village who is assigned to the school as an assistant to the teacher. She can perform some teaching functions under the direction of the teacher, and can teach handicrafts and other skills, and serve also as the school peon and general helper to the lady teacher. Having such a person in regular attendance at the school has many advantages besides the enrichment of the program. It could add program stability, increase teacher effectiveness, and make the rural teaching position more attractive to female teachers. At present, the teacher's late arrival or early leaving in order to catch available transportation simply results in a truncated school day for the children. And when the teacher is absent, which in some cases is more often than seems reasonable in many villages, the school simply remains closed. The teacher aide assignment could help alleviate this problem. Such aides would be given a program of in-service training, and over an extended period of time, might become regular teachers.

7. Challenge to Integrate Services at the Village Level

Regardless of the kind of program offered, if it comes into the village as an isolated service or improvement without a coordination with other services it is doomed to a very marginal level of success or impact.

The educational needs in the village must be seen as needs of human beings. As long as the delivery of services is parcelled out in a bureaucratic standardized, compartmentalized, insensitive manner without regard to or coordination with other available resources and services, the needs of the village people will not be met.

Government of Pakistan programs are bureaucratically structured into various ministries and deliver services into the village level in such a way as to structurally insure a fragmented view of life. These services come into the village as though there were no connection between education and family planning, or agriculture and adult education, or health and economic development, etc. There appears to be very, very little genuine cooperation and coordination among ministries and departments, etc. The Ministry of Education should exert every effort to coordinate its programs with the programs of other ministries at the provincial, district, and village levels.

V. EXPERIMENTATION FOR SUCCESSFUL SOLUTIONS TO THE PROBLEMS OF PRIMARY SCHOOL ATTENDANCE

The conclusion still remains that pupil attendance -- the retention/dropout problem -- is the most important single barrier to the expansion of the primary education system. Furthermore, while the national collection of data has identified many problems and documented such matters as the extent of pupil dropout, causes of drop out, quality of facilities, curriculum, teachers, characteristics of drop outs, etc., and the inter-relationships among these factors, it has not given direct answers about the specific solutions to these problems.

It thus appears necessary to (a) formulate the best possible solutions from the available research findings, the on-site observations, and common sense; (b) try out and test these possible solutions in a wide variety of villages; and (c) point up the implications of such experiments to broad scale programs with long-range considerations. Treating these topics constitutes the remainder of this Chapter.

A. FINDING SOLUTIONS TO THE DEFINED PROBLEM

The data collection phases of this research has identified and delineated the extent of problems in primary education. The use of the village planning model and the on-site village surveys have provided a series of possible alternative solutions to these

problems. There remains the task of implementation, and evaluation; that is, experimentation, the first task of which is to develop a solution-strategy. The following rationale and procedures were used to design the solution-strategy.

First consideration was given to the correlation of primary school attendance with total village development. This was taken to mean that at present in Pakistan the improvement of primary school effectiveness and pupil attendance and the elimination of drop outs does not appear feasible with a single, simple, blanket solution. The successful solutions appear to consist of many elements in unique combinations for each village. They can, however, be successfully provided. Relying on the causes of pupil drop out described in Part III herein, the first elements were drawn from the needs assessment experience and shown in Table VI. Next, the principal and major causes of drop out identified by the teacher-facilitator research teams were placed in juxtaposition (again, see Table VI). In the same table, according to pupils, teachers, and parents, the highest and most consistently mentioned reasons for boys and girls who drop out or do not attend are shown. Now, as shown in Table VI, these needs, causes, and reasons were interpreted collectively in order to identify a common core of solutions that would serve as the basis for the solution-strategy used.

A brief description of the solution-strategy thus derived is given at the bottom of the table.

TABLE VI: RATIONALE FOR DESIGNING THE SOLUTION ELEMENTS USED TO SOLVE THE PROBLEM OF PRIMARY SCHOOL ATTENDANCE

Needs from Village Assessments	Teacher-Facilitator Causes of Dropout	BOYS	GIRLS	Solution [*] Elements
		Reasons for Dropout by Pupils, Teachers and Parents	Reasons for Dropout by Pupils, Teachers and Parents	
Economic Development	Poverty	Expenses of Education (Poverty) Unemployment	Expenses of Education (Poverty) Unemployment	Scholarships. (Texts, Uniforms, Food, etc.)
Health	Illness	Illness	Illness	Health and First Aid Units
Literacy	Ignorance & Illiteracy			
Citizenship	Negative Parent attitude	Parents negative attitude	Parents negative attitude	Parent Orientation Sessions
Vocational Skills	Education considered irrelevant	Homework		Skill & Handicraft Training (Projects)
Religious knowledge, Moral values			Purdah or Pupil Engagement	Religious Teaching (Quran)
	Inadequate school bldg. & facilities		Inadequate buildings	Renodeling or inexpensive construction
	Curriculum considered irrelevant	Lost interest	Lost interest	Instructional materials & library, sport equipment
Social Skills		Employment offer Harvest at Exam. time	Employment offer Harvest at Exam. time	School Projects
	Lack of Poor Teachers		Lack of ^{or} poor teachers	Teacher aides & in-service trng.

*NOTE: Solution-Strategy: The solution elements were combined into an overall solution-strategy that designed some format at each of these. The local village leadership, teacher(s), local and district administration had to propose or accept such features as were feasible and advantageous for the particular village in attempting to double boy and triple girl enrollments without drop out.

CONCLUSION : A comprehensive solution-strategy was designed. It was based on the fruits of the needs assessments, the findings of the nationwide data analysis, and supplemented by try out applications in the on-site village surveys. In essence it holds that to be effective, any pilot or widespread program of upgrading primary education must go beyond any isolated input into the village, such as only school building improvement, only a curriculum enrichment, or only an upgrading of teachers. The solution-strategy is held to be most promising if the program coordinates in-school and out-of-school village factors with the efforts of other services and resources in the village.

B. PATTERNS OF EXPERIMENTATION THAT HAVE
BEEN INAUGURATED

The verbal acceptance of solutions and the creation of plans on paper is one thing. Getting the plans fulfilled in a way that the proposed solution-strategy meets the basic needs and objectives can be quite another matter. It therefore appeared to be advantageous to implement, monitor and evaluate the accepted solution-strategies in a select number of villages. In fulfilling these plans the villages were thus involved in the experiments.

Table VII presents a roster of the villages in rural Pakistan within which various types of experimentation with boys and girls primary schools is currently underway. From the table it is possible to determine in brief the specific elements of the overall solution strategy that are being tested. There are, in addition, some purely experimental innovations, such as school projects and an incentive rupee plan (Plan A) for increasing attendance. A detailed description of these village schools and the experiments being carried out in them is provided in Section VII of the Appendix.

TABLE VII

COMPONENTS OF THE RURAL VILLAGE PRIMARY SCHOOL
EXPERIMENTS TO DOUBLE ATTENDANCE OF BOYS
AND TRIPLE ATTENDANCE OF GIRLS, 1977

Village	Experimental Components*	Village	Experimental Components*
<u>N. W. F. P.</u>		<u>FED. TERR.</u>	
1. Shab Qadar	A B C D	10. Ghagari	Q K L C C M T
2. Mian Isa	A E C D	11. Dhalhala	Q H C M T O U
3. Tangi	A F D	12. Bura Bangyal	Q K T C E S M C
4. Rajjar	A G H D I J	13. Jagiot	C S O M B
<u>PUNJAB</u>		14. Pihont	V L M J C S
5. Muridwala	A K I D L B M J	15. Shah Allah	
6. Neas Beg	A G C J M N E	Litta	K O W M X N
7. Dinna Nath	A G L M J	16. Lreghi Mori	Y K R O J N
<u>SIND</u>		17. Dera Nau	
8. Haji Natho	A D L H P J	Ghazi	Y-L X H
Landhi	C E N		
<u>FED. TERR.</u>			
9. Loi Behr	Q D R S O T M E		

* CODE :

- A = Cooperative administration between male and female administrations
B = Move primary school -- or part -- into rented building or other government building
C = Curriculum enrichment with materials
D = Sheds for classrooms
E = Teacher aides for skill training, etc., and in some cases teach adult classes
F = Moving primary school(s) in with a middle school facility
G = Consolidating two or more schools into one
H = Redeployment of teaching staff to other assignments within the same or other school
I = Boundary wall and latrines
J = Additional instructional equipment; i.e. sewing machines, tools, to serve regular classes as well as adult education
K = Building remodeling or repair
L = Mix boy and girl enrollments, in all classes or in selected classes
M = Adult education classes to change village attitudes toward education
N = Scholarships, such as clothing articles, textbooks, etc., for new enrollees.
O = School project, such as farm, furniture finishing, sewing
P = Provide religious instruction

TABLE VII (contd.)

*CODE :

- Q = Intermediate management, i.e. one headmaster administers two or more schools
- R = Use of a mosque as a school building
- S = Health and First Aid Unit
- T = Revolving library kits
- U = Shared machine maintenance (sewing & teaching)
- V = Use donated new school
- W = Program for dropouts; boys or girls
- X = Plan A : an incentive rupee scheme to build attendance
- Y = Inaugurate a new school == either boys, girls, or mixed.

C. IMPLICATIONS OF THE VILLAGE EXPERIMENTS

The experiments described herein have only begun, It will take 3 or 4 months to see the potential impact of the experimental changes. Moreover, it may take several months or even a year or two to observe whether these experimental changes have brought about permanent improvements.

In another sense, however, the experiments are already a success. They can be designed for virtually any village and they have pointed up the potential and desirability of dramatically increasing enrollments. The fact that local teachers, administrators, and some village leaders could come to an agreement on worthwhile goals and then initiate action to achieve such goals has in itself been a major milestone in some villages. There are, however, other noteworthy implications of these experiments that are presented in the following paragraphs.

1. Increasing the Efficiency of Primary Schools

If the goals of primary education are reflected into individual behavior, a new perspective may be gained. For example, if functional literacy is a goal, then it is doubtful that those youngsters who drop out of primary school before finishing Class IV or V will be -- and will remain -- functionally literate.

Estimates about the present education system in terms of this goal would show that less than a fourth of the boys and far less than a tenth of the girls in Pakistan are becoming functionally literate as a result of primary school experience. This consideration would make the cost per pupil to achieve literacy a tremendously expensive effort on the part of the Government. Looking at the drop out rate of schools in this light, reveals a tremendous waste of human resources and a gross inefficiency of primary schools. Doubling enrollments and holding such youngsters in school with a very minor investment, such as used in these experiments, holds promise of multiplying the efficiency of schools, and dramatically decreasing the cost per pupil to achieve literacy.

2. Cost-Effectiveness of Various Types of Primary School Improvements

One of the implications of the primary school experiments can be seen as a demonstration of cost-effective ways to improve village schools. Looking at school expenditures in this way helps to reassess goals and the alternative means of achieving them. As an illustration, it may be advantageous to make a crude comparison between school costs to construct a new building under present policies and school costs used under the solution-strategy of the experiments described herein.

The preliminary observations from the data and field work this past 12 months would hold that simply constructing a new school building of the present type and used as it is will not appreciably increase pupil enrollments. However, to carry out the illustration, let us assume that the enrollment increases by 10 percent with a new building. Then

Pre-New Building, Enrollment = 100	$\frac{\text{Pupil Increase}}{\text{Cost}} = \frac{10}{\text{Rs. 40,000}} = \frac{1}{\text{Rs. 4000}}$
Post-New Building, Enrollment = 110	
Cost of New Building = Rs. 40,000	

The cost effectiveness of such an expenditure is only one pupil per Rs. 4,000 or one-fourth pupil per Rs. 1,000.

The hypothesis used in the present experiments, on the other hand attempted to double boy enrollments and trip girl enrollments, and the maximum expenditure for any one school was Rs. 10,000. Then

Pre-Experiment Enrollment	= 70 Boys, 30 Girls = 100
Post-Experiment Enrollment	= 140 Boys, 90 Girls = 230
One Time Cost of Experiment	= Rs. 10,000

$$\frac{\text{Pupil Increase}}{\text{Cost}} = \frac{130}{\text{Rs. 10,000}} = \frac{13}{\text{Rs. 1,000}}$$

Thus, discounting some possible long-range differences, it may be seen that the experimental expenditures were theoretically 52 times more cost-effective than the conventional school building expenditures.

3. Implementation of a Large Project for Improving Rural Primary Education

The experiments with village primary schools hold important implications for projects aimed at school improvement. First, they allow for the formulation and try-out of various alternative solutions in an effort to find "the best" or at least the one that can obtain practical consensus. Second, they allow time for decision-making in charting a project course where the best specific improvements are not as yet known. Third, they invite a planning phase followed by an implementation phase in project development.

To illustrate these three points, let us suppose that it appears advantageous to implement a project in primary education, even though the specific kinds of building improvements, teacher-training programs, instructional equipment and materials, etc., have not as yet been determined. The project can, nevertheless move ahead with a planning phase where the "whats" or specifications are defined, then a period of experimentation, negotiation and reaching of consensus is programmed in to a point where the "hows" or specific designs are approved and cleared for widespread implementation, evaluation, renegotiations, etc.

VI. PARAMETERS FOR A PROPOSED PROJECT FOR
PRIMARY EDUCATION IN RURAL PAKISTAN
1977 - 79 AND ONWARD

This final Chapter is an attempt to integrate all of the research findings of the primary education studies of the past 12 months into an overall project of effective assistance to village schools in rural Pakistan. Alternative project strategies were considered, but the formula approach recommended herein seemed to promise the most just and most efficient means of accomplishing the proposed project purpose and objectives.

The reader is cautioned not to be too concerned with the numbers or amounts computed into this recommended project format. These numbers and relationships can be very easily changed. The important part is to see the array of principles involved, programs supported, and how all of these fit into a useable way of channeling resources through existing governmental structures into the wide variety of villages.

A. THE PROBLEM, MISSION, CONSTRAINTS AND
SPECIFICATIONS

1. NEED STATEMENT: All persons in rural Pakistan need to acquire the basic skills, knowledge, attitudes, and habits essential to living a full and successful life.

2. PROBLEM: How can the basic skills, knowledge, attitudes, and habits essential for a full and successful life in Pakistan be acquired by all people of that country.

3. MISSION: Provide primary school learnings to all children in rural Pakistan.

4. CONSTRAINTS:

- a. Program to meet the need is approximately ten years
- b. Program must be Government of Pakistan's and carried out by the Federal and Provincial Government agencies.
- c. USAID assistance may be massive and long-range but it is limited to \$7 million during the first tranche (2 years) and is to serve a supplemental and catalytic purpose.
- d. The program cannot be village specific, but must instead use a formula type of application to a large number of villages (3,000 or more during the first tranche).
- e. The USAID input must only be a small portion of the total resource effort to solve this problem.
- f. The project must be comprehensive, both geographically (include some districts in all provinces), and functionally (not focus on only one or two parts of a total program).

- g. The focus of the project will be primarily on in-school factors, such as buildings, staffing, curriculum, management. A portion of the project can aim at out-of-school factors, such as adult education, scholarships, health, etc., but these cannot take the format of "village development".
- h. The main thrust of the project (90 percent or more) is to be developmental (capital as well as operational). A small proportion can be experimental or research oriented.
- i. The design of the project must be output specific, that is, it must be possible to identify particular accomplishments in terms of pupils educated, buildings constructed, teachers trained, materials distributed, etc.
- j. The impact of the project must be on the rural poor, and particularly on the female populations.

5. COVENANTS, RESTRICTIONS, AND SPECIFICATIONS:

- a. District management for primary schools of both sexes must be under one unified district-level administrator.
- b. The overall responsibility for the primary schools of both sexes within a project village must be with one person.

- c. Flexibility must be provided in school building construction. It must be possible for the provincial or district education officials to design and build or remodel project schools, sheds, etc., without involvement of the Public Works Department.
- d. There must be flexibility in the use of various types of teachers and teacher aides and in their patterns of compensation in project schools.
- e. There must be flexibility in waiving or modifying examination programs for students and there must similarly be flexibility in modifying vacation periods for pupils to conform with special village needs, such as harvest times.

6. PERFORMANCE REQUIREMENTS: At the conclusion of the first tranche (24 months) after the launching of the project), the following will have occurred :

CRITERION

VALIDATED BY

- | | |
|--|---|
| <p>a. Beyond the normally expected increases -- projected from the previous five years changes -- in primary school enrollments, an additional 1/2 million or more rural children will either</p> <ul style="list-style-type: none">I. be attending primary school (more than 250,000), orII. have ready access to primary schools not currently available, more than 60 percent of these will be female <p>b. Of all new primary school entrants attributable to this project, the measured and anticipated dropout rate during the five years of primary education will not exceed 20 percent for boys or 30 percent for girls.</p> <p>c. The program of instruction provided to the new entrants will show evidence of being or becoming -- or be judged to be effective -- or becoming effective -- in meeting the knowledge, skills, habit and attitudinal needs of youngsters for fulfilling a successful life in Pakistan.</p> | <p>a. Official estimates of school enrollments by Federal, Provincial, and district sources, which may be supplemented with verified, Government of Pakistan and USAID approved documentation.</p> <p>b. Official attendance records plus sample interviews with teachers, parents, and pupils.</p> <p>c. Sample survey of curriculum content, materials and methods used plus opinion data from official teacher, supervisory, and management personnel.</p> |
|--|---|

CRITERION

VALIDATED BY

- | | |
|--|--|
| d. No existing or currently projected developmental or operational program of the Government of Pakistan in education will be curtailed or given less emphasis. | d. Enrollments in non-project schools will increase according to existing 5-year trends, regular school building programs will continue on schedule, distribution of curriculum materials, teacher training programs, etc. will continue |
| e. A thorough evaluation and an external educational audit of the project will be carried out every 12 months. | e. Evaluation and audit reports are published to meet professional specifications. |
| f. At least ten major experiments will be completed within the first 24 months of the project. Part of these are to be conducted in each province separately in order to more adequately tailor assistance to meet unique provincial needs. Others may be national or multi-provincial in scope. | f. Published research studies on file and approved by a professional, quality assurance committee. |

B. RECOMMENDED USAID-GOP PROJECT PARAMETERS
1977 - 79

1. Target: Using \$30 million (\$7 million of USAID) on a sample of 5,000 villages to bring 500,000 additional children into primary schools and upgrade the educational offering for nearly one million pupils, mostly girls and all from the rural, poor population of every province and area in Pakistan.

2. Formula: In an attempt to meet adequately the varied needs of the wide spectrum of Pakistan villages, the following formula is recommended to maximize the impact of equitably distributed resources :

Resources will be apportioned to villages on the basis of :

- a. Flat Grants, direct to the village (i.e. library kit, literacy materials, handicraft equipment, tools, allowances for teacher aides and adult education teachers).
- b. Flat Grants, indirectly to the village (i.e. teacher training, training of teacher aides, training of adult education instructors, machine and equipment maintenance, management training).
- c. Variable Factor Grants depending on :
 - I. Size of Village (i.e. those with many youngsters will receive more than those with few).
 - II. Wealth (i.e. those villages with higher economic ability or affluence will receive less than those with lower ability. Such funds will be used for scholarships, such as, clothing, textbooks, food, etc.)
 - III. Existing Schools (i.e. those villages without schools or without school buildings will receive more than those with schools and buildings).
 - IV. School Enrollments (i.e. those with crowded enrollments in existing facilities will receive more than those with sparse enrollments or only enrollments in certain classes.)

V. School Organization (i.e. villages with separate schools for boys and for girls will require more resources than those with mixed or partially mixed at certain class levels).

VI. Remoteness (i.e. Villages in remote areas or in inaccessible locations will require more resources than those on main roads within daily commuting distance for urban teachers.)

VII. Readiness (i.e. Villages that are willing to mix enrollments or consolidate schools are to be given additional resources, provided that such movements are in the long run fiscally advantageous.)

3. Experimental and Research Grants (i.e. technical assistance, project evaluation, experimentation, studies on problem areas, etc.)

C. A RECOMMENDED FORMULA AND AN ILLUSTRATIVE APPLICATION

The distribution formula for this project to channel resources into rural villages is recommended to be :

$$F + I + X + N [S E (T + B + M + W) + R + P] = G$$

Where : F = Flat Grant, Direct	E = Enrollment in terms of facilities
I = Indirect Flat Grant	T = Teacher assigned
X = Experimental Grant	B = Building Package
N = Number of villages of a type of existing schools and organizations	M = Remodel Package
S = Size of Village (factor)	W = Wealth of Village Factor
	R = Remoteness of Village
	P = Project Readiness of the Village

1. Flat Grants; Direct

		<u>Rs</u>
Library Kit Rs. 200; Literacy		
Materials, Sports Equip. Rs. 500	Rs. 9,000 x 5000	45,000,000
Handicraft machines and mat'ls Rs. 1500	villages	
Teacher aides 2 @ Rs. 2400/yr. for 1 yr ave		
Adult education Teacher (part time)		
2 @ Rs. 1000 each for 1 yr. ave		

2. Flat Grants, Indirect

Teacher Trng Rs. 300 per Tchr x 2	Rs. 3,000 x 5000	15,000,000
Teacher Aide Trng Rs. 300 per aide x 2	villages	
Adult Educ Instr trng Rs. 300 per tchr x 2		
Machine & equip. maint. Rs. 200 for ave 1 yr		
Management trng Rs. 500 per principal x 2		

3. Research Grants

Project evaluation & audits]		
Technical assistance] 6% of		
Project evaluation] 250 million		
Experimentation]	Rs. 3,000 x 5000	15,000,000
Special studies, etc.]	villages	

4. Variable Factor Grants

I. 1000 villages without schools (Varying types in size, wealth, remoteness & readiness)	47,700,000
II. 1000 Villages with one or more schools for both sexes, but no building	63,100,000
III. Villages with schools for both sexes -- only one building	54,700,000
A. 700 with only one government owned building	
B. 300 with only one rented building	
IV. Villages with separate schools for both sexes -- 2 or more buildings	35,500,000
A. 400 with both buildings government or village owned	
B. 300 with one building government owned and one rented	
C. 300 with both buildings rented	
V. Villages with one school and mixed-or potentially mixed -- boy and girl enrollments	27,900,000
A. 700 with govt or village owned buildings	
B. 300 with rented buildings	

GRAND TOTAL: Rs. 303,900,000

TABLE VIII.
FORMULA FOR RESOURCE DISTRIBUTION TO PRIMARY SCHOOLS

TYPE OF VILLAGE SCHOOL & FACILITIES	FLAT GRANT			EXISTING SCHOOLS			SIZE			ENROLLED			WEALTH			REMOTE-NESS			PROJECT LEADERS	
	D	I	X	T	B	M	S			E			W			R				
	DIRECT	INDIRECT	EXPERIMENTAL & RESEARCH	TEACHER ASSIGNED (SALARY)	BUILDING CONSTR. PKG.	REMODEL OR REPAIR BUILDING	SMALL POP. (LESS THAN 1000)	MEDIUM POP. (1,000 - 6,000)	LARGE POP. (OVER 6,000)	CROWDED	CAPACITY	SPARSE	HIGH ABILITY	MID. ABILITY	LOW ABILITY	SUBURBAN	MODERATE	REMOTE		
IMPACT % OF VILLAGES	100	100	100				70	20	10	10	20	70	10	20	70	70	20	10	10	20
I. WITH NO SCHOOLS	9	3	3	10	20		X1	X2	X3	X1	X1	X1		1	2		1	2	3	1
II. WITH ONE OR MORE SCHOOLS BUT WITH NO SCHOOL BUILDING	9	3	3	5	20		X1	X2	X3	X3	X2	X1		1	2		1	2	3	1
(ASSUMES ONE BLDG SERVING)																				
III. WITH SCHOOLS FOR BOTH SEXES BUT ONLY ONE A. GOVT.-OWNED BLDG	9	3	3	5	10	5	X1	X2	X3	X3	X2	X1		1	2		1	2	3	1
B. RENTED BUILDING	9	3	3	5	20		X1	X2	X3	X3	X2	X1		1	2		1	2	3	1
IV. WITH SEPARATE SCHOOLS FOR BOTH SEXES AND WITH TWO OR MORE BUILDINGS THAT ARE A. BOTH GOVERNMENT OR VILLAGE OWNED	9	3	3	5	10	10	X1	X2	X3	X3	X2	X1		1	2		1	2	3	1
B. ONE GOVT. OWNED AND ONE RENTED	9	3	3	5	10	5	X1	X2	X3	X3	X2	X1		1	2		1	2	3	1
C. BOTH RENTED	9	3	3	5	20		X1	X2	X3	X3	X2	X1		1	2		1	2	3	1
V. WITH ONE SCHOOL AND MIXED BOY AND GIRL ENROLLMENTS IN A A. GOVT.-OWNED OR VILLAGE OWNED BLDG	9	3	3	5		10	X1	X2	X3	X3	X2	X1		1	2		1	2	3	1
B. RENTED BLDG	9	3	3	5	20	70	X1	X2	X3	X3	X2	X1		1	2		1	2	3	1

ANNEX A

APPENDED NOTES
FOR DETAILS OF CALCULATIONS

A-1

CALCULATIONS FOR VARYING COST FACTORS

FORMULA: $N [S E (T + B + M + W) + R + P] = G$

- I. Villages with no schools
 - a. 700 small $[1 \times 1 (10 + 20 + 0 + 2) = 700 \times 32 \text{ K} = 22,400 \text{ K}$
 - b. 200 med. $[1 \times 2 (10 + 20 + 0 + 1) + 1 + 1] = 200 \times 64 \text{ K} = 12,800 \text{ K}$
 - c. 100 large $[1 \times 3 (10 + 20 + 0 + 0) + 2 + 3] = 100 \times 125 \text{ K} = 12,500 \text{ K}$
- II. Villages with School (s) But No Buildings
 - a. 700 small $[1 \times 1 (5 + 20 + 0 + 2) + 0 + 0] = 700 \times 27 \text{ K} = 18,900 \text{ K}$
 - b. 200 med. $[2 \times 2 (5 + 20 + 0 + 1) + 1 + 1] = 200 \times 106 \text{ K} = 21,200 \text{ K}$
 - c. 100 large $[3 \times 3 (5 + 20 + 0 + 0) + 2 + 3] = 100 \times 230 \text{ K} = 23,000 \text{ K}$
- III. Villages with One Building
 - A. 700 with only one government-owned Building
 - a. 490 small $[1 \times 1 (5 + 10 + 5 + 2) + 0 + 0] = 490 \times 22 \text{ K} = 10,780 \text{ K}$
 - b. 140 med. $[2 \times 2 (5 + 10 + 5 + 1) + 1 + 1] = 140 \times 86 \text{ K} = 12,040 \text{ K}$
 - c. 70 large $[3 \times 3 (5 + 10 + 5 + 0) + 2 + 3] = 70 \times 185 \text{ K} = 12,950 \text{ K}$
 - B. 300 with only one Rented Building
 - a. 210 small $[1 \times 1 (5 + 20 + 0 + 2) + 0 + 0] = 210 \times 27 \text{ K} = 5,670 \text{ K}$
 - b. 60 med. $[2 \times 2 (5 + 20 + 0 + 1) + 1 + 1] = 60 \times 106 \text{ K} = 6,360$
 - c. 30 large $[3 \times 3 (5 + 20 + 0 + 0) + 2 + 3] = 30 \times 230 \text{ K} = 6,900 \text{ K}$
- IV. Villages with Separate Schools for Both Sexes and with Two (or More) Buildings that are
 - A. 400 with Both Buildings Government (or Village) Owned
 - a. 280 small $[1 \times 1 (5 + 10 + 10 + 2) + 0 + 0] = 280 \times 27 \text{ K} = 7,560 \text{ K}$
 - b. 80 med. $[1 \times 2 (5 + 10 + 10 + 1) + 1 + 1] = 80 \times 54 \text{ K} = 4,320 \text{ K}$
 - c. 40 large $[1 \times 3 (5 + 10 + 10 + 0) + 2 + 3] = 40 \times 80 \text{ K} = 3,200 \text{ K}$
 - B. 300 with One Building Government Owned and One Rented
 - a. 210 small $[1 \times 1 (5 + 10 + 5 + 2) + 9 + 0] = 210 \times 22 \text{ K} = 4,620 \text{ K}$
 - b. 60 med. $[1 \times 2 (5 + 10 + 5 + 1) + 1 + 1] = 60 \times 44 \text{ K} = 2,540 \text{ K}$
 - c. 30 large $[1 \times 3 (5 + 10 + 5 + 0) + 2 + 3] = 30 \times 65 \text{ K} = 1,950 \text{ K}$
 - C. 300 with Both Buildings Rented
 - a. 210 small $[1 \times 1 (5 + 20 + 0 + 2) + 0 + 0] = 210 \times 27 \text{ K} = 5,670 \text{ K}$
 - b. 60 med. $[1 \times 2 (5 + 20 + 0 + 1) + 1 + 1] = 60 \times 54 \text{ K} = 3,240 \text{ K}$
 - c. 30 large $[1 \times 3 (5 + 20 + 0 + 0) + 2 + 3] = 30 \times 80 \text{ K} = 2,400 \text{ K}$
- V. Villages with One (or More) School Mixed (or Potentially Mixed) Boy and Girl Enrollments
 - A. 700 with Government or Village Owned Buildings
 - a. 490 small $[1 \times 1 (5 + 0 + 10 + 2) + 0 + 0] = 490 \times 17 \text{ K} = 8,330 \text{ K}$
 - b. 140 med. $[1 \times 2 (5 + 0 + 10 + 1) + 1 + 1] = 140 \times 34 \text{ K} = 4,760 \text{ K}$
 - c. 70 large $[1 \times 3 (5 + 0 + 10 + 0) + 2 + 3] = 70 \times 50 \text{ K} = 3,500 \text{ K}$
 - B. 300 with Rented Buildings
 - a. 210 small $[1 \times 1 (5 + 20 + 0 + 2) + 0 + 0] = 210 \times 27 \text{ K} = 5,670 \text{ K}$
 - b. 60 med. $[1 \times 2 (5 + 20 + 0 + 1) + 1 + 1] = 60 \times 54 \text{ K} = 3,240 \text{ K}$
 - c. 30 large $[1 \times 3 (5 + 20 + 0 + 0) + 2 + 3] = 30 \times 80 \text{ K} = 2,400 \text{ K}$

TOTAL ALL VARYING GRANTS
FLAT GRANTS

228,900 K
75,000 K
303,900 K

ANNEX B: DETAILED FINDINGS AND RESEARCH EFFORTS DIRECTED
AT FULFILLING THE REQUIREMENTS OF THE
PROJECT REVIEW PAPER

In completing the kinds of research outlined in the Project Review Paper (PRP), the Bureau of Educational Planning and Management (BEPM), which is under the Federal Ministry of Education, was to be mainly responsible for conducting the research studies. The BEPM had requested, through the Ministry, that AID provide 12 man-months of assistance of an education research designer to assist them in development and overseeing of the execution of the studies, and in analysis of the results. In conducting the studies the BEPM has taken the position that it does not need strictly educational researchers, but able research personnel from a wide range of fields doing research about education. They have been and are in a position to draw on scholars and practitioners knowledgeable about educational administration, economics, sociology, demography, school construction, etc. Many studies have been launched and will be supervised by the BEPM although conducted by other government institutions and contractors. The USAID Mission and the Ministry of Education has supported this with grants of rupee funds.

Based on some initial work by a Primary Education Team, the BEPM and AID proposed an outline scope of work for some four research studies which were thought to be required to provide

the necessary data to the Primary Education Development Project, PP. The four research studies were as follows :

Study One - Causes of Dropouts

Purpose: Sample study to determine relative effective improvement of the primary school program has on increasing retention rates.

1. Why do boys and girls start school and why do they drop out? (See Part III for extensive tabulations of responses gleaned nationwide).

What are the empirical indicators of the effect of the quality of education on entrance and drop outs (cited in III) in areas such as :

- a. The implementation of the new curriculum. (Responses to this question from all teachers in the national sample were tabulated. Some 80 percent reported using the new curriculum and the majority who have inaugurated the new curriculum believe that it will be helpful in decreasing drop out and improving pupil attendance. See Study # 76 of the Research Design).
- b. Availability and quality of instructional materials.

These data were gathered both by frequency and by average (quality) ratings. The frequencies, differences among districts, and implications will be published in Study # 62 (See Research Design). The scored information

is presented for both boys and girls schools in the Appendix, herein, Data Sheets A-III and covers blackboards, bulletin boards, reading materials, books, writing materials, and number materials.

c. Co-educational classes. The number of districts in each province and the percentage of mixed classes in these districts is as follows :

	<u>Boys Schools</u>		<u>Girls Schools</u>	
	<u>Mixed</u>	<u>Not Mixed</u>	<u>Mixed</u>	<u>Not Mixed</u>
NWFP	1 dist(6%)	4 dists.	2 dists (22%)	3 dists.
PUNJAB	6 dists(10%)	1 dist.	4 dists (17%)	3 dists
SIND	3 dists(40%)	0	1 dist (6%)	2 dists
Baluchi- stan	1 dist(44%)	4 dists.	2 dists (37%)	3 dists
Islamabad	25%		37%	
=====				

d. Availability of teachers -- male and female. Teachers in the rural schools were asked if teachers were available in adequate numbers. The summaries showed wide variations among the districts and the following national

	<u>ADEQUACY OF TEACHERS</u>			
	<u>MALE</u>		<u>FEMALE</u>	
	<u>YES</u>	<u>NO</u>	<u>YES</u>	<u>NO</u>
Male Teacher Responses	64%	36%	55%	45%
Female Teacher Responses	49%	51%	63%	37%

The further development of these and related data are to be published in Study #70 of the Research Design.

e. Multi-grade class data were gathered on each school in the 416 villages, but tabulations have not as yet been completed.

f. Existence and adequacy of facilities including boundary walls. The quality of the school buildings in each of the 416 villages was determined on the composite basis of some 24 different measures. The details of these scores, nationally, are presented in the Appendix, herein, Data Sheet A-II. These data are to be further developed and published in Study # 63.

2. Are there significant differences in the backgrounds and characteristics of those who first enter, those enter and drop out and those who complete primary education?

There are highly significant statistical differences, as determined by 20 interviews in each village with matched pairs. See Part IV herein for the findings. The detailed information is presented in the Appendix, Data Sheets B. These data are to be further verified and developed in Studies # 75, 76, 77, 78, 79, 80 and 81 of the Research Design.

3. Parental attitude regarding boys and girls going to school (costs, work opportunities foregone, customs, etc.) For details, see Part III herein.

What is the relationship of findings in 1 and 2 to 3 above?

Extensive correlations were calculated between all of the factors cited above. The various correlation matrices with the levels of significance are discussed herein (Part IV) and presented in the Appendix - Section V. Further correlations were run with these same factors and the matched pairs data. All of the matched pair categories were significant in their inter-correlations.

Study Two - Facilities and Transportation

Purpose : To determine location of project schools and their construction requirements. Recommended in the formula presented in Part VI.

1. Distribution of school age population in relation to schools. These data were gathered in terms of attendance of each individual school. The broader meaning is being carried out in a school mapping study which is partially completed.

2. Location, availability, utilization and condition of existing school facilities. This was covered extensively in the quality scores of school buildings. See Appendix, Data Sheets A-III.

3. Availability and adequacy of teaching materials such as chalk boards, charts, maps, etc. Gathered comprehensive data, both qualitative and quantitative. See Appendix, Data Sheets A-III. Also see Study # 62 of Research Design.

4. Design of buildings, furniture and equipment, alternatives for lowering costs per pupil. Basic data on buildings has been gathered. Currently underway is a utilization study. An architect is now working on alternative designs.

5. Teacher housing -- needs an alternative arrangements including costs and likely effectiveness of housing vs local recruitment to attract and retain female teachers in rural areas. Data thus far indicate that teacher housing is not an attractive alternative. Most promising alternative appears to be a local teacher aide. See Part IV herein.

6. Village self-help in construction and maintenance of facilities, past, potential. More than ten of the village experiments now underway have a village self-help component that deals with construction and maintenance. See Part V herein and Appendix VII for details.

7. Transportation conditions and needs affecting supervisors and teachers. These data were gathered nationwide and reveal very meager and limiting provisions. Details will be published in Study # 64 of Research Design.

8. Costs of above items where applicable. Costing is a part of the foregoing studies related to construction and management only.

Study Three - Instructional Program

Purpose: To determine minimum quality program requirements.

1. Alternative strategies for acceptable level of pre-service and in-service teacher training and continuing teacher contact with supervisors. Extensive teacher opinion data gathered and tabulated nationwide. BEPM is attempting to contract studies on preservice and in-service training. Part of this topic will be covered in Study # 70 of Research Design.

2. Characteristics of teachers and supervisors. Extensive data gathered nationwide will be published in Studies # 64 and # 70.

3. Quality of teaching aids and instructional materials. Extensive data gathered nationwide will be published in Studies # 62, # 74 and # 76.

4. Impact of examination system and status of automatic promotion policy. Teacher opinion data were gathered nationwide on these topics. A study on age-grade patterns of attendance will require more data.

5. Teacher attitudes towards new curriculum, teacher training, promotion policy, students. These data were gathered in the national sample and will be treated in part by Studies # 70, # 76, # 80, and the age-grade study.

6. Teacher incentives to live in rural areas and to change traditional teaching patterns. Extensive data were gathered on this topic in the national sampling. The results are to be published in Study # 70 of the Research Design.

7. Provincial plans and implementation flexibility in introducing new curriculum, textbooks and related materials. Much of the basic data have been gathered nationwide. More will need to be gathered for a good management study or series of studies.

8. The need for change in mix of content and methodology in teacher training. Extensive teacher opinion data were gathered, nationwide, on these topics. Study # 70 and studies on in-service and pre-service training should treat these topics.

9. Costs of above items where applicable. No detailed costing data on the foregoing topics is considered acceptable. An attempt was unsuccessfully made to gather such information, however.

Study Four - Planning and Information Capabilities

Purpose: To determine financial and human resource requirements at Federal and Provincial levels to implement project.

1. Educational data gathering and analysis. A management study is currently underway to describe these processes. No nationwide data were gathered.

2. Expenditure and cost effectiveness data. Some rough cost effectiveness ratios were calculated on school building construction in comparison with experimental costs. See Part V.

3. Planning and decision making capabilities. A management study is underway to ascertain these capabilities.

4. Management capabilities for implementation of project. Being sought indirectly through management studies.

5. Need for and nature of technical assistance for the project. Part VI, herein, outlines recommended parameters, including technical assistance for a project.

6. Need for short-term training in project management. Part VI, herein recommends a management training component.

7. Other donor activities realistically assessed. This has not been accomplished except in a series of informal meetings with various donor agencies.



Appendix

Primary Education In The Rural Villages of Pakistan

BEPM

1976-1977

APPENDIX
of
PRIMARY EDUCATION IN THE RURAL VILLAGES
OF PAKISTAN, 1976-77

BUREAU OF EDUCATIONAL PLANNING AND MANAGEMENT
MINISTRY OF EDUCATION
GOVERNMENT OF PAKISTAN

January 1977

ACKNOWLEDGEMENTS

A great deal of time, effort, patience and cooperation are required to accomplish a nation-wide study of villages and schools. Thousands of persons have been directly involved in the study reported herein. The authors wish to acknowledge the direct and indirect assistance of the following persons who made this study possible:

- 1) Mr. Abdul Hafeez Pirzada
Federal Minister for Education & Provincial
Coordination
- 2) Dr. Mohammad Ajmal
Education Secretary
- 3) Capt. U.A.G. Isani
Additional Secretary
- 4) Dr. Tahir Hussain
Joint Secretary
- 5) Mr. Ashraf Qureshi
Joint Educational Adviser
- 6) Dr. Khalid Hassan Bokhari
- 7) Mr. Mirza M. Musheer
Assistant Education Adviser
- 8) Mr. Makmoor Ahmed Goheer
Assistant Educational Adviser
- 9) Dr. Ijaz Ahmed Chaudri
Assistant Education Adviser

- 10) Dr. A. Chafoor
Assistant Educational Adviser
- 11) Mr. Ahmed Beg
Assistant Educational Adviser
- 12) Mr. Fayyaz Ahmed
Education Officer
- 13) All Secretaries of the Provincial
Education Departments
- 14) Mr. G.M. Shah (Raja Said & Raja Ashraf)
Assistant Director of Education,
Federal Capital Territory
- 15) The Staff of Colleges of Education,
Institutes of Educational Research and
Provincial Education Departments
- 16) The Staff of the Bureau of Educational
Planning and Management
- 17) Students of the Quaid-i-Azam University,
Islamabad

In addition, a number of key persons associated with the United States Agency for International Development (USAID) have been extremely helpful in making this study possible. These include:

Joseph C. Wheeler, director
Harold Freeman, assistant director
Charles D. Matthias, assistant director
James D. Murray, education officer
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It has been a pleasure and a privilege to work with all of the foregoing persons in the accomplishment of this research.

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B.E.P.M., Islamabad, 1977

APPENDIX

to

PRIMARY EDUCATION IN THE RURAL VILLAGES OF PAKISTAN, 1976-77

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I - PURPOSE AND OBJECTIVES

The primary education research study began in February, 1976 and has thus far proceeded through most of its planned activities. The first phase was the development and field testing of a primary school-village action programme. The model developed was successfully field-tested in four villages during the months of March and April. The next major activity of the study was to collect comprehensive school-community information from each of 25 districts in Pakistan.

Purpose of the Research

This research has aimed at improving the lives of the people of Pakistan. Its prime focus has been on the village primary schools and its emphasis was to benefit the rural, lower income portions of the population of Pakistan, with special consideration to the female and disadvantaged. If this project achieves its purpose it will validate and document successful innovations in the villages that feasibly reduce pupil drop-out, improve learning, and meet the needs of the target populations.

Specially, the study has attempted to identify and document the causes of drop-out in the primary schools in all provinces of Pakistan. Furthermore, it has attempted to show the relationships between pupil drop-out and such factors as curriculum, building and facilities, school

management, etc. Even more importantly, it has recommended specific ways to solve the dropout problem in Pakistan. Its culmination will hopefully be in a proposal for a large-scale project for improving primary education for the rural, poor and particularly the female populations of Pakistan. The village primary schools are seen as one of the means for improving community life and developing the human and material resources of the villages.

Objective and Expected Outcomes

In the broadest sense, the purpose of this study as previously defined was its prime, overarching objective. More specifically, the initially stated and the subsequently emerging objectives of this study have been to:

1. Design, field test and validate an educational needs assessment and planning model which would serve successfully in the rural villages of Pakistan.
2. Use this validated model in a select number of villages of various types to successfully generate at least a five-year plan for the development of education therein.
3. Pilot test the implementation of a number of those five-year educational development plans to determine their usefulness and effectiveness. In addition, such

implementation experience should identify promising educational innovations at the village level and give some indication as to the amount of external assistance required and how such assistance can best be channeled into the village school improvements.

4. Gather, tabulate, and analyze the extensive nation-wide data on schools, etc. These data should provide a basis for policy decisions and long-range planning and development for education in Pakistan.
5. Assess the management capabilities of the Government of Pakistan on the federal, provincial and district levels with regard to an ability to successfully carry out a significant development project for improving primary education.
6. Strengthen the inter-relationships and the planning and research capabilities and productiveness of various educational research institutions in Pakistan.

As a result of these research efforts, the following tangible products should be available:

1. The publication of at least 24 research studies.
2. The development of a management capabilities assessment, nation-wide and by province, and in a limited number of districts.

3. The documentation of the unique and critical educational needs of a sampling of villages. These will represent at least one village in every province and in the Federal Territory.
4. A set of national baseline data that can be used in the evaluation of educational efforts and experimentation for at least the next 5 years.
5. At least 5 experimental pilot innovations in primary education that have been carefully designed and are being field-tested for successful implementation.
6. A coordinated system of indicators of educational attainment culminating in a Gross Product of Education that has been designed, field tested, and compiled.
7. A planning model for the development of primary education in Pakistan will be developed, field tested and validated.
8. The planning model consisting of needs assessment, the selection of a best alternative solution, a plan for implementation, and an evaluation design will be applied to at least 8 villages. The plans produced will have been implemented and monitored in at least 4 villages.

9. Four national studies will be written for possible publication: -

- a. Causes of dropouts in the primary schools.
- b. Curriculum validity of primary schools.
- c. Primary school plant and facilities.
- d. Management capabilities for primary school development.

10. A project proposal for USAID/Washington will be compiled from the foregoing plans and studies.

II - BACKGROUND, PERSPECTIVE AND SCOPE

General Setting

Pakistan's population is predominantly rural, poor and illiterate. Some 55 million people live in approximately 43,000 villages, where the median farm size is less than 10 acres and the 1972 income per household was about \$40 or less per month. Of the nation's more than 70 million people, in excess of 50 million are illiterate. This is considered as a major barrier to the country's scientific, social, political and economic progress. It also provides an index to the culturally barren existence of millions of individual citizens.

Most observers agree that primary education has been the most neglected subsector of education in Pakistan. Moreover, it is conceded that the existing educational system already provides adequate opportunities for the upper income groups. The neglected areas of education are in the rural parts, with the economically disadvantaged, and the female portions of the population. Only 8.7% of the female population was literate in 1971-72.

While Pakistan's system is undergoing a number of reforms, it is acknowledged that current data are unavailable or inadequate to assure that such reforms meet the basic needs of the target populations and are within the financial limitations of the country.

Origin of the Study

This research effort emerged out of an offer of a loan from the USAID to assist the Government of Pakistan in the achievement of its priority objective of universalization of primary education. It is considered that about 80% of the boys and 40% of the girls of school aged population enter grade I but more than half of them drop out before completing grade V. This is more pronounced in rural areas particularly in case of female children. The factors responsible for drop-out were deemed to be of special significance.

The causes of drop-out, primary school instructional programs, physical facilities, and educational management and supervision in the rural areas were to be thoroughly investigated during the year preceding the USAID formal loan negotiations.

On the request of the Government of Pakistan, USAID agreed to provide financial assistance and the services of an educational research designer to help the Bureau of Educational Planning and Management undertake the required studies.

III - GUIDELINES AND ASSUMPTIONS THAT
PROVIDED DIRECTION AND EMPHASIS TO
THIS STUDY

An initial set of values and beliefs were compiled to guide these research activities. The following compilation of these beliefs and assumptions -- values -- may thus be seen as a kind of philosophy of this research effort.

Overall Guidelines

1. This project aims at generating research that will help Pakistan deliver quality education in rural primary schools at minimum cost. It will give special attention to the education for girls.
2. There is no shortcut or easy, cheap, quick way to educate people. It requires significant support and time. It is believed at this time that the existing school system offers the best opportunity for educating the largest possible number of children. Non-formal means may be supplemental.
3. There is a need to build up adequate educational research capabilities in each province and region of the country, to coordinate the activities of various educational research institutions, and to mobilize their human, institutional and leadership resources.

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4. The role of external funds should be seen as supplemental to local, provincial and federal resources. Such funds should provide guidelines and incentives for increased support of a stable and permanent nature.
5. Programs funded by external resources should be as simple to administer as possible. This principle advocates keeping the variety of improvements to a minimum and fixing definite criteria and centers of responsibility.

Guidelines Related to the Planning Model

6. Those research findings are best when they are directly utilized in the decision-making process.
7. In order to bring about institutional change it is advantageous to define needs at the learner level. That is, those that result in a modification of human behavior.
8. Educational needs -- and objectives -- are best when they allow for flexibility. That is, when they are allowed to differ from village-to-village, from province-to-province, etc.

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9. Plans and goals are best when they are defined by the people who will execute or reach them. The participation of professional staff with lay citizens; of community members of different classes and sex is wholesome and desirable.
10. In changing people's behavior and bringing about institutional change, it is advantageous to involve people in participatory planning and problem solving. Ideally, a reasonable planning and management capability should exist in every school-community.
11. In local planning and problem-solving, the specific solution - decision is not as important as the follow up with enthusiasm and the effectiveness of implementation, management, etc.
12. A major problem in Pakistan -- and other developing countries -- is the inability of the people to organize themselves and work together. These people have much talent but seem to be unable to mobilize it for a sustained, productive period. Thus, many plans are made, but frequently little is accomplished.

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13. Villagers know much more than is usually assumed. The reason they do not follow through on what they know is because there are so many other factors that militate against such action.
14. A basic challenge of this project is to organize Pakistani people at the village and markaz levels to help themselves -- to identify their needs, help them see the solution, and get a commitment from them to solve their primary education problems.
15. A basic challenge in this research effort is to mobilize and utilize the human and leadership resources of each institution, province, territory, bureau, etc. (i.e. BEP, IER Lahore, Hyderabad, Peshawar, etc.)
16. There is a need to provide -- or restore -- structures of local government that will take the responsibility for meeting the educational needs of all the children. If Pakistan's primary schools are to be successful and adequately sustained, there must be an interest, a responsibility, a commitment locally.

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17. Developing reforms in education from local roots has far more promise than transplanting some innovation from the outside. In the first place, implementing a "proven innovation" is a separate problem itself. In the second place many innovations do not have clear-cut, successful results. Or, if they do, there is little assurance they can be successfully transplanted into another country, culture, or community.

Guidelines Related to the Collection and Analysis of Village Data

18. In the collection and processing of data, particularly in the behavioral sciences, there is always the possibility of some errors. Every attempt must be made to eliminate errors in instruments, in training interviewers, in tabulating, etc. However, it must be recognized that some errors will be present regardless of the precautions taken when large amounts of data are gathered and processed. Levels of confidence and significance and the interpretations given to findings must give recognition to these possibilities of error.

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19. Data that are, say, 85 percent accurate are not as good as those which are 98 percent accurate. However, they are still useful. Making decisions based on data that is 85 percent -- or even 65 percent -- accurate is much better than basing decisions on no data at all.
20. Statistical significance may be quite different than operational significance. Thus, while the processing of data may reveal statistically significant differences, these may not be sufficiently conclusive to serve as the solid basis for long term policy decisions. Such a solid basis is defined as "operationally significant."

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IV - STRATEGY AND RESEARCH DESIGN

The focus of this research effort was to obtain a sufficient amount of well documented information which would permit sound policy decisions for a massive improvement of rural primary school attendance. The major thrust, therefore, was to be a series of research efforts that would identify standards and validate educational practices which will mould the future of rural primary education. These successful practices could then be replicated and widely used.

The validation and diffusion of these successful new patterns of education was to be co-financed by external assistance and the Government of Pakistan. Moreover, these efforts could set the stage for succeeding projects to diffuse these validated practices and thus extend improvements for the target groups throughout the entire system, nation-wide..

The staff of the Bureau of Educational Planning and Management, was to be thoroughly involved in designing the study and in the field-testing and other activities. They, in turn, would work with the provincial and district educational research, planning, and supervisory personnel and IRDP staff to carry them through the total exercise. In this way a major part of the research was to be carried out by the staff of the Bureau of Educational Planning, Islamabad; the Institute of

Educational Research, Lahore; similar types of staff members at Hyderabad and Peshawar, and personnel in the various provincial and district departments of education. Involving such personnel in a coordinated research effort, nation-wide, was believed to be the best possible way to establish lines of communication between the various bureaus, agencies, and institutions of the country. Moreover, the entire exercise was expected to serve as a type of in-service development for the professional growth of these research planning and service personnel.

It was to be the responsibility of the Research Designer, to assist in initiating studies and coordinating efforts. He would also assist in the design of the studies, monitor them, and exercise a role of quality assurance.

The overall strategy of the research effort was to be comprised of five separate phases: (A) the designing and field testing of instruments and models; (B) the collection of extensive baseline data in a nation-wide sample of villages; (C) the application of an educational planning and development model in selected villages; (D) the execution and publication of a large number of relevant research studies; and (E) the monitoring of village plan fulfilment to validate practices and procedures. Each of these phases is discussed in some detail in the remainder of this chapter.

PHASE A: DESIGNING AND FIELD-TESTING INSTRUMENTS AND MODELS

The initial phase was to be a creative one. It was to call on worldwide experience through the research designer in helping the BEPM staff to develop the data collection instruments and create the village planning model. In each case the process was the same: design, create, try-out, revise, try again, etc.

Developing the Data Collection Instruments.

One aspect of evaluation is measurement. Measurement is a procedure that transforms qualitative, difference into quantitative distinctions or gradations. Further, it is a step toward a definition of standards and is a means of introducing precision in the judgemental process.

The use of measurement in acquiring precision to village observations would thus add a significant new dimension to the descriptive data and information gathered. It was intended to put a calibration into data collected and help standardize the values assigned thereto. A famous quotation by Lord Kelvin summarizes this viewpoint:

When you cannot measure what you are speaking about,
when you cannot express it in numbers, your knowledge
is of a meagre and unsatisfactory kind; it may be the

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beginning of knowledge, but you have scarcely in your thoughts advanced to the stage of science, whatever the matter may be.

The data collection forms to be used in connection with this research effort were to be scoreable. They would thus constitute a series of evaluation devices -- measuring instruments -- that would represent an attempt to quantify such abstractions as primary school attendance, curriculum, building and facilities, management and administration, local village resources, community development, and non formal and informal education. The instruments were to have the following unique features:

- * An attempt was to be made to give a quantitative measure to the qualitative aspects of the phenomena studied. Thus, while the measured quality of a school curriculum might be obtained from 20 or more separate observations, the resultant measure was an indicator of the 'goodness' of the school's learning environment.
- * The scoreability of the data collection forms was to simplify the processing of large amount of data. Such data could then be channelled back almost immediately into the decision making mechanism of the village.

- * The data to be collected could be used to measure each separate category comprising the instrument or it could be summed up for the totality of the entire village.
- * The comprehensiveness of the instrument was to permit the computation of an overall index of human resource development of the village in terms of a Gross Product of Education (GPE).

Designing the Village Planning Model

The planning model to be developed was to focus on the village level where preliminary factual and opinion data were to be gathered. These and other data were then to be channeled into a representative village committee for planning action.

With the assistance of a trained, outside facilitator, the village planning committee was to define and document the educational needs of the village. In a subsequent meeting, alternative solutions were to be found for the identified needs. These were to be reviewed and the best solution selected by the committee. Also a plan was to be formulated for implementing this solution, using mostly local resources. The validated needs, selected solution, implementation

plan and budget together with a monitoring and evaluation design for each village was to be compared and consolidated into a Markaz or District Plan by another representative committee.

The model was to be evolved out of extended deliberations in the Bureau of Educational Planning & Management. In all significant phases of the preparation of the model and its field testing, senior researchers from all the premier educational research institutions of the country including Institute of Education and Research, Lahore, Institute of Education and Research, Hyderabad, College of Education, University of Peshawar, and College of Education, University of Baluchistan, were to be intimately associated.

Field Testing the Instruments and Planning Model

A great deal was expected to be accomplished during the field testing experiences. Procedural modifications of the model were to be made as they appeared necessary or advantageous. Only in this way could the data-collection instruments be significantly upgraded, revised, and expanded.

For field-testing, personnel had to be recruited and trained and permission obtained to work in pilot villages. In these try out exercises, the research personnel and facilitators were to ~~exercise~~ a role of quality control. It would be important for them to see that every element of

the model or instrument was following faithfully and that all information was collected and accurately reported.

PHASE B: COLLECTING BASELINE DATA FROM A NATION -WIDE SAMPLE OF VILLAGES

This phase of the research was to collect and process large amounts of information on education in each village. It would require a large number of interviews to be conducted among the youngsters and adults in every village under study. Such interviews would attempt to gather data and opinions about the critical needs of education and causes of pupil dropout. The findings of these factual and opinion studies could then serve as a basis for improving education in rural Pakistan.

Data to be Collected from some 800 Villages in Two Stages

Extensive information about the girls primary schools and patrons and the boys primary schools and patrons was first to be gathered in some 25 districts. These 25 would be comprised as follows: 1 Islamabad, 5 NWFP, 5 Baluchistan, 7 Punjab, 7 Sind. A stratified sample of 16 villages was selected in each district for the data collection in some 400 villages.

In a second stage a similar sampling would be made in the remaining 25 districts of the country as well as in the tribal areas and territories.

Design of the Data Collection Instruments.

The data collection instruments used in this study were to be unique in many ways. In the first place, they would be comprehensive in scope--ten almost mutually exclusive sections. Secondly, as mentioned earlier, each section would be scoreable; that is, it would be possible to get a qualitative score from a substantial array of indicators in such factors as village resources, school buildings, etc. Thirdly, these instruments were to gather baseline data in such a way that progress on all dimensions of village life could be comparatively measured a month, a year, or 5 years later. And finally, the entire galaxy of indicators and measures must be so designed that they could be summarized into a total village standard score and a single gross score -- A Gross Product of Education. This latter would represent as indicator of the total developed human resources of the village.

In the collection of village data, each facilitator would be required to gather several items of scoreable information that would duplicate that gathered by the teacher. This was deliberately designed this way in order to improve the accuracy and reliability of the village data.

It should be noted that the scoreable forms teachers were to complete were set forth as being completely objective. That is, they proposed to

be an attempt to have eliminated virtually all avenues for using subjective judgment. Any number of users, therefore, regardless of their educational background or philosophy, should theoretically arrive at essentially the same score if they were taking measures on the same village. The score forms, however, were not refined sufficiently to do this. The facilitator who was to train the teacher on how to complete the forms was also to gather sample items to verify that the teacher's observations were accurate and the ratings given were neither too liberal nor too stingy.

The teachers -- male and female -- who were to fill out these forms for a given village would have to be alerted by the facilitators for the need to cooperate. Some sections, such as the GPE (Gross Product of Education) and school attendance would require census and enrollment type information for males and females. Thus, the forms could not be fully completed until data from both sources had been accurately gathered --- or estimated -- and tabulated.

Determining the Research Design for the Dropout Studies.

The initial research design for the dropout studies in this effort could best be characterized as solely descriptive. Such studies of pupil dropout constitute the overwhelming majority of research projects

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in countries around the world as well as previous dropout studies conducted in Pakistan 1/. While useful, solely descriptive studies have many limitations, particularly in attempts to document causation or to get at consequences of dropping out of school.

After careful consideration of a wide variety of possible research designs, it was decided that using a "collapsed longitudinal" design would be the most advantageous. Shortly after the beginning of the new school year (mid-April) the enrollment lists were to be examined against the previous year's lists to determine which pupils had left school at each class level. By interviewing the teacher of each class the researcher would then attempt to match a very recent "dropout child" with a "stay-in child" on the basis of ability, socio-economic status, achievement, etc. These matched pairs would thus be identified at every class level for boys and for girls in each village. Then by interviews, the researcher would attempt to identify the differences between the matched "stay-ins" and "dropouts".

The Research Design for the National-wide Sampling of Villages

As indicated earlier, the project was to be undertaken in over 800 villages in two stages. The villages were to be selected from a stratified

1/ Russell Berin, David Kinsey and Noel F. McGinn, Antecedents and Consequences of Early School Leaving (Paris:UNESCO, 1972), Chapter II.

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sample from each district of the country. In order to draw a fairly representative sample, each district was to be viewed in terms of its radius. The conditions of primary education would thus be studied in relation to the distance of the village from the major urban centre of the district. For this purpose, the district was to be divided into four sections.

Section I To include villages located within the first $1/4$ of the radius from the district headquarters.

Section II To include villages located within the second $1/4$ of the radius from the district headquarters.

Section III To include villages located within the third $1/4$ of the radius from the district headquarters.

Section IV To include villages located within the last $1/4$ of the radius from the district headquarters.

From each Section, four villages were to be selected keeping in view that the selected villages would be generally representative of each district selected for the study.

The primary schools both male and female, if existing separately, in each of the selected villages would be the main focus of the study.

An officer of the Bureau of Educational Planning and Management (BEPM) was to be assigned to each province as Coordinator of the

project. His task would be to call on the Education Secretary of the province in order to seek his support in carrying out the project. Under the chairmanship of the Education Secretary, a meeting of the Directors of Education and the District Education Officers would be convened in which the BEPM Coordinator would explain the purpose, scope and methodology of the research project. The need for help, cooperation, and involvement of the District Education Officers/District Inspectors of schools was to be emphasized and established.

Each District Education Officer and District Inspector of schools would be asked to identify the villages in which the study was to be completed, according to the criteria explained earlier. He would also provide the list of names of the headmaster and headmistress of each primary school under study who would help in gathering baseline data. In addition, the District Education Officer /District Inspector of Schools would also depute a male teacher and a female teacher, preferably a headmaster and a headmistress, from the high schools/middle schools located in the same Section of the district but not in the villages under study. These two high school/middle teachers, one male and one female, called facilitators, would then conduct interviews and gather opinion data in all the four villages of a particular Section of the district.

The BEPM Coordinator was to give orientation and training to the facilitators in conducting interviews and gathering opinion data and also in training local primary school teachers in the collection of baseline data.

Apart from training the primary school teachers in collection of baseline data, the facilitators would be responsible for getting the task completed by the teachers within the specified time and also for ensuring quality control.

The Ministry of Education was to make token payment as honorarium to the teachers and facilitators for the work on the study.

The B. E. P. M. Coordinator would necessarily travel extensively to coordinate and monitor the research efforts.

Criteria for the Successful Management and Execution of the Data Collection Effort.

One important dimension of the primary education study was to assess the management capabilities of the federal, provincial, and district education authorities. The data collection exercise was to serve as one means of testing these capabilities. The criteria for gauging success were to be:

1. The completed data forms and interview schedules were to be properly filled out and returned on time from every village in the sample.

2. The success and quality of the results of the project will provide some index to the support and cooperation of the Provincial Education Departments.
3. The personal interest and attention of the Provincial Education Secretaries would be needed in the project. The quality and success of the results would reflect this also.
4. The Provincial Education Secretaries would have to issue instructions to the Divisional/Regional Directors, District Education Officers/District Inspectors of Schools, and the high school/middle school/primary school teachers selected to work on the project to provide unreserved cooperation and assistance in all stages of the project. Again the results would provide an indicator to the effectiveness of this administrative mechanism and its operation.
4. If transport facilities could be made available to the B.E.P.M. Coordinator at the district headquarters to visit the project villages, it would greatly facilitate the operations. This, too, could serve as an index of effectiveness.

5. How effective the logistics of the effort would be could also be determined, in part, by the prompt and adequate reimbursement of the participants. Token payments by the Federal Ministry of Education as honorarium to the teachers, facilitators and District Education Officers/District Inspector of Schools involved in the project were to be approved at the rate of Rs. 100/-, Rs. 200/-, Rs. 200/- per person respectively.

PHASE C: APPLYING THE VILLAGE EDUCATIONAL PLANNING MODEL

The village educational planning model was designed in phase A. The overall strategy of the primary education study called for initially implementing the model in four different types of villages. Later the model was to be applied to villages in each province.

Underlying Research Design and Objectives of the Village Educational Planning Model

The basic rationale and research design for the village planning model was the seven step procedure of the scientific method shown diagramitically in Figure 1. Each step of the model was to meticulously follow these seven steps, beginning with the village needs assessment and culminating in the village plan to implement the selected solution together with an evaluation scheme.

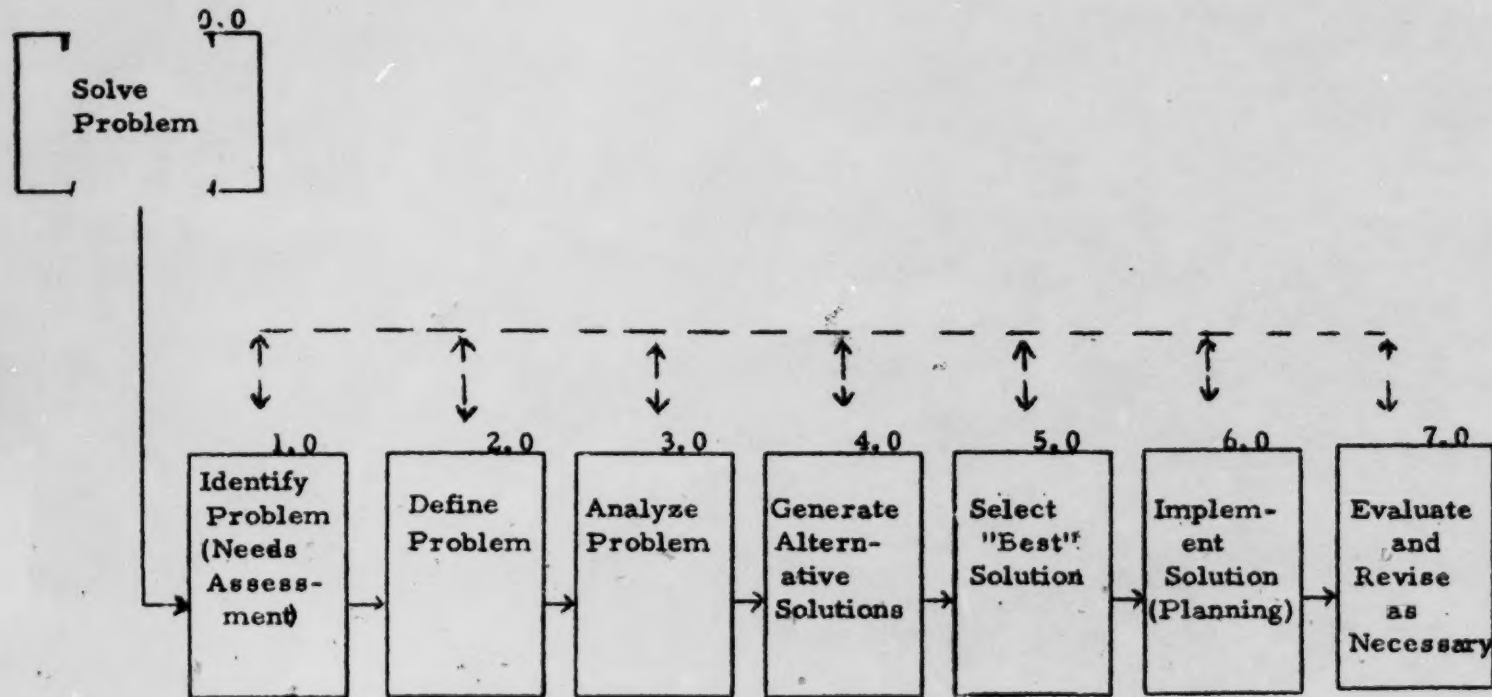


Figure 1: DIAGRAM OF THE SCIENTIFIC METHOD
(OR GENERIC PROBLEM SOLVING MODEL)

The major objectives of the village educational planning model were to be:

1. To evolve and validate a methodology for the motivation of the rural people to improve the functioning of their primary schools.
2. To assist the rural people in recognizing and better utilizing their own potentialities and resources for educational development in their village.
3. To help rural people appreciate and actively engage in participatory planning for educational improvement.
4. To have representative rural people serve on a local ad hoc planning committee for village education.
5. To secure from the local educational planning committees a 5-year village educational development plan, thus initiating planning from the grass roots.

Collecting Preliminary Facts and Village Information

Using the village educational planning model required that preliminary factual and opinion data be gathered about such matters as primary school attendance, dropouts, retention, curriculum, facilities and equipment, and community leadership. These and

other data were then to be processed in such a way that they could be channelled into representative village planning committees. Such data were to be of assistance to these committees in their planning efforts.

Induction of local primary school teachers into the village research and planning efforts:

One male and one female teachers preferably but not necessarily the headmaster and headmistress, from each of the local boys and girls primary or middle schools were to be given orientation to the project. The data collection forms would then be presented and explained thoroughly so that the teachers could take them to the village with confidence and return the collected information in a week. The male teacher was to concentrate on the male and the lady teacher on the female populations. The data collected by both the teachers were to be coordinated and reconciled with the help of the facilitators.

Setting up village Needs Assessment Committee Separately for Men and Women and Scheduling their Meetings:

As the male and female teachers go to their village to collect factual information, each of them was also to convene meetings of people belonging to various classes, interest groups, etc. The male

teacher was to convene separate meetings of craftsmen, shopkeepers, labourers, farmers, tenants, etc. The female teacher was to organize similar separate meetings of women coming from the homes of different categories of people such as mentioned above. Each teacher was to encourage the village participants to give expression to what they considered as the most crucial problems of the village and to nominate a person to represent them on the village Needs Assessment Committee. After a male and a female Needs Assessment Committee has been constituted in the village, each teacher was to ask the Committee to set dates for four meetings of four hours duration each. It was deemed advisable that the meetings of the male and female committees be scheduled on the same dates at the same time. After the teachers collected the factual data, constituted Needs Assessment Committees and scheduled the meetings, they were to report back to the facilitator with all the information.

Training of Facilitators:

While the teachers were collecting data and setting up Needs Assessment Committees, another set of persons, one male and one female, preferably high school or college teachers not belonging to or working in the project village, were to be given training in conducting

Needs Assessment Committee meetings as scheduled by the local teachers. When teachers would report back with factual data, rosters of Needs Assessment Committees and schedule of meetings, the facilitators were to discuss and carefully examine and reconcile all the information with the teachers.

Conducting Needs Assessment Committee Meetings:

The Facilitators were to conduct the village meetings according to the established schedule. The concerned teachers were to act as secretaries in these meetings. The Facilitator was to introduce himself and get acquainted with each member of the committee and then explain the whole plan of activities. The need of participation of each member was to be emphasized. The following process was to be completed in the four meetings:

1. The facilitator was to elicit from the Committee members the most crucial needs of the village and list them on a blackboard. Typically, the needs expressed by village people would be likely to include Increase in Income, Electricity, Education for Girls, Dispensary, Drinking Water, Roads, Employment, etc.

2. After the committee members have articulated all their needs, the Facilitator would attempt to explain the difference between ends and means; between needs and solutions; between products and processes. This was to be one of the most crucial steps of the model. Committee members must be shown clearly that what they had indicated were typically not needs but means or solutions to resolve needs. Needs it must be explained, are those things the fulfilment of which results in a change in the behaviour of a person --in his attitude, in his knowledge, in his skills. Thus the needs must be defined at the level of a learner.
3. As soon as the ~~members~~ of the committee could distinguish between needs and solutions, they would be ready to prepare a new list of the most crucial needs of the village. The Facilitator was to write the responses from the members on the blackboard. This time the revised list of needs would likely include religious practice and appreciations, vocational skills, reading, writing and simple accounting skills, home making skills, health, etc.

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4. The next step after the listing of village needs was to have the committee members vote on the priority of each need. Thus an order of priority to resolve the village needs would be established.
5. Each identified need was then to be thoroughly analysed, carefully examining the facts about its existing conditions in the village. The committee could then sets goals for the improvement of existing conditions in regard to each identified need in terms of a statement of values. This then would become a comparative chart of what is and what ought to be. The difference between what is and what ought to be would show the extent of the need or the magnitude of work required to be done to resolve the need. The committee would also determine the target population in respect of which the need would have to be fulfilled, put a measure on its criticality, and set performance requirement or evaluation criteria as to the conditions when the need will be considered resolved.

Reviewing Alternative Solution-Strategies and Selecting the "Best"

In a subsequent meeting, various alternative solutions were to be examined to meet prioritized needs. The Facilitator was also be

present three or more solution - strategies in the form of coordinated effort to resolve the validated needs in one package. The Facilitator was also to impress upon the committee the advantages of providing opportunities to students and teachers for direct participation in the operations of different community projects. The committee then reviews carefully all the suggested solutions and selects the best in terms of acceptability, feasibility, benefits, costs, etc.

Participatory Planning with the Village Committees

The selected solution is then to be translated in to the form of a village development plan giving the details of the composition of the village, persons or committees responsible for implementing the village plan, the projects desired to be undertaken, the implementation program, the resources required, cost sharing between the local community and the government, etc.

Providing an Evaluation Scheme

Before finalizing, the village plans are checked for technical accuracies and with the committees' participation the facilitator is to lead out in developing a scheme for evaluating the success of the planning and implementation efforts.

PHASE D: EXECUTION AND PUBLICATION OF RELEVANT STUDIES

To appreciate the importance of Phase D, it is necessary to get a perspective on the research products that will emerge from phase B and C. Phase B, it may be recalled, was to gather broad scale, extensive data from a sample of hundreds of villages. As these data are tabulated and analyzed there are bound to be some blindspots in the data, some areas that require verification and further probing in depth, some findings that beg for expansion because of unexpected implications. These follow-up types of research would be a part of phase D activities. Furthermore, a massive nation-wide study has many advantages, but district-wide and province-wide studies with additional depth and probing for unique jurisdictional findings and implications also have important values.

Timing:

Phase D will necessarily have to follow the partial completion, at least, of Phases B and C because most of the basic data will be generated from these efforts. If comprehensive data from 25 districts were gathered during the first part Phase B, then the district-wide studies could be carried on simultaneously with the second part of Phase B. The balance of the district studies and all of the provincial and national studies would

be forced to wait until the completion of Phase B.

Similarly, any follow-up studies rooted in Phase C would be forced to wait until at least separate village plans were developed.

Necessity for Widespread Involvement and Participation

It is generally recognized that for research studies to be utilized effectively they must be understood by those who will use them. This usually means that it is advantageous to get participation and widespread involvement of the persons who will be affected from the studies. This tends to assure understanding of the research and its implications for action.

The research design of Phase B called for a broad, sweeping survey, nation-wide. Thus, it appears logical to involve competent researchers who are residents or knowledgeable of a particular district to conduct the indepth jurisdictional studies called for in this phase, Phase D. Similarly, for the nation-wide studies, competent researchers who are widely recognized in their fields of specialization, should be asked to carry out these studies. Not only should this give assurance of the finest quality of study, but it should also enhance the possibilities of the studies being utilized and thus opening the way for educational improvements.

It is for this same reason that in the design of Phase C, the primary

school teacher (or head teacher) was given a leading research role.

Research Design for 85 Studies in Phase D

It appears advantageous to complete and publish a series relevant major studies in primary education. Adequate data can be gleaned from each district in Pakistan to formulate a major study. These data deserve the careful analysis and detailed write up that will assure their usefulness in school improvement in the district and villages under study.

A framework or research design for these 85 or more studies in primary education is presented in Figure 1. Following this design will give assurance of the separateness of the studies themselves but will also provide a coordination of efforts, a mutually helpful reinforcement of results, and a cumulative positive impact of the total effort.

From Figure 2 it may be seen that some 60 jurisdictional studies are proposed. This would consist of 50 district studies, 4 territorial studies, 5 provincial or total territory studies, and 1 nation-wide comprehensive study. Once again referring to Figure 1, some 13 topical studies drawn mainly from the scoreable sections of the data collection forms are proposed (Numbers 61 to 73 in the Figure). Another 9 studies are suggested using primarily the nonscoreable data to be collected (numbers 74 to 82 in the Figure), and a variety of sector studies can be executed.

IV-27

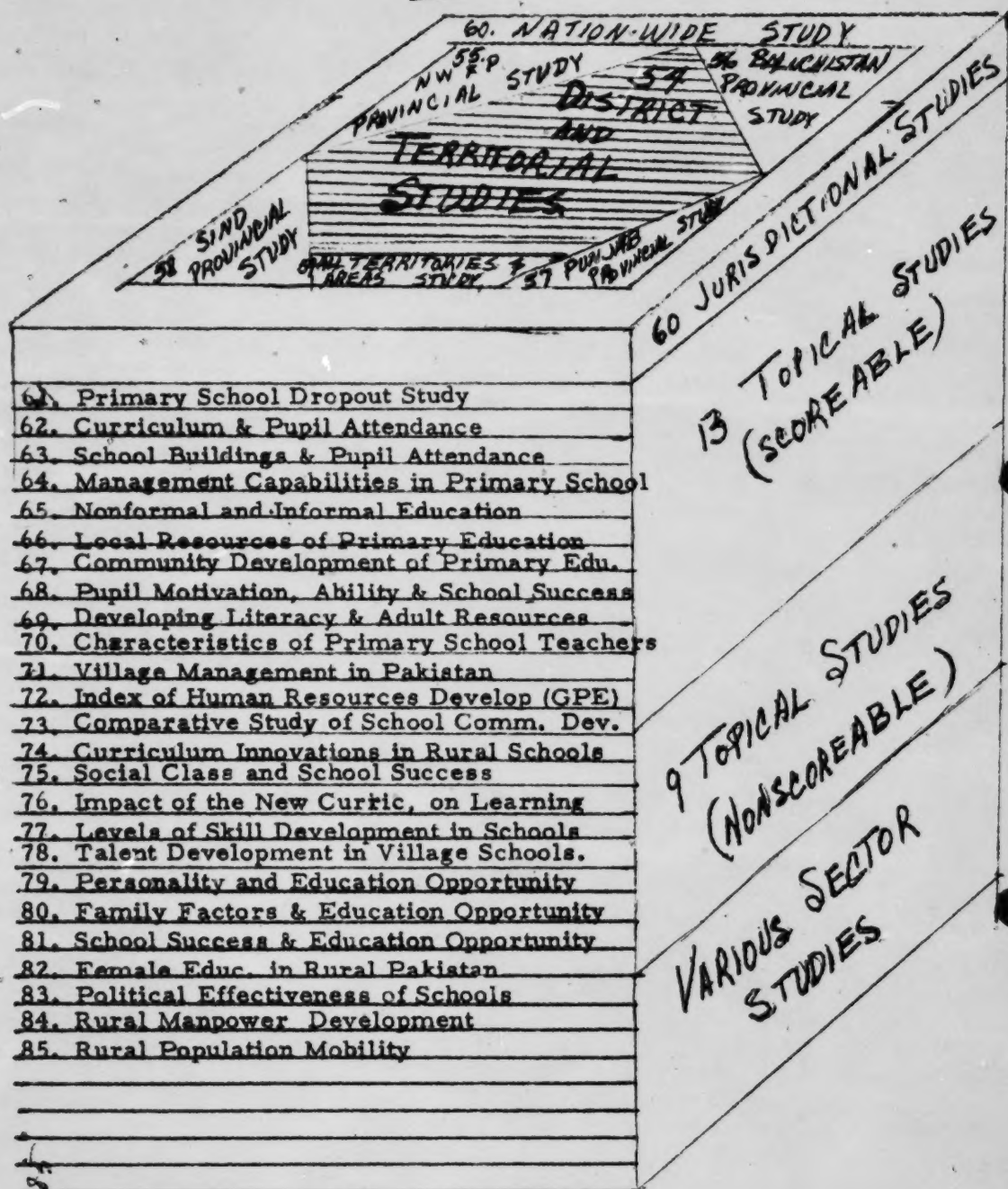


Figure 1. RESEARCH DESIGN FOR STUDIES OF
PRIMARY EDUCATION IN PAKISTAN

Coordination of Studies

Following the research design in Figure 1 can provide an integrated, mutually reinforcing, nation-wide research effort. It is proposed that this effort be united, coordinated and monitored by the BEPM. Initiating and coordinating these varied research efforts throughout Pakistan could do much to strengthen the communication and relationships among the research institutions and the BEPM. It could also do much to strengthen the research capabilities of individuals and institutions nation-wide. It is hoped that these activities could serve as a beginning for establishing some constructive, permanent working relationships with the BEPM.

PHASE E: EXPERIMENTAL RESEARCH ON THE FULFILLMENT OF VILLAGE EDUCATION PLANS

After the completion of the planning exercise in some villages during the execution of Phase C, it will be advantageous to monitor and evaluate the fulfillment of such plans within a one year time span, including a coordinated delivery of village services. This monitoring and experimentation can be successfully carried out simultaneously with some other phases, such as B, C and D. Some of the accomplishments to be provided by Phase E and outlined in the following paragraphs.

Learning How Village Plans are Fulfilled

By monitoring the way selected villages fulfill their educational plans it will be possible to assess the commitment and true enthusiasm

of the villagers for the plans they collectively formulated. It will be of interest to see how villagers organize themselves to accomplish certain elements of their plans. It may be possible to discover and document optimum types of organization for expediting certain types of accomplishments. Such observations may also provide valuable insights for improving the village planning model or the planning process itself.

Assess the Effectiveness of Educational Innovations

During the execution of Phase C, many educational innovations will probably be identified as desirable. These may include such new practices as using a mosque as a school; using a school on a double shift basis for boys in one shift and girls in another; mixing boys and girls in classes in order to maximize building utilization; inaugurating a school health unit; implementing an adult education program using primary school facilities or personnel, or both; employing an attendance officer; sharing certain school personnel with other villages, etc. By careful observations and documenting the performance of such innovations, some useful evaluations can be obtained. These may well serve as a basis for widespread improvements in primary schools throughout Pakistan.

Experiment with Various Ways of Channeling Resources into a Village to Obtain Maximum Educational Development

It would be advantageous to know how resources can be prudently channeled into village development so that villager motivation is enhanced and educational results are maximized. Phase E of this research design would permit resources to be provided in a variety of ways and the effectiveness of each way to be carefully assessed. For example, setting up revolving funds may be effective in certain types of villages, requiring a matching component of local labor and material for external funds and technical assistance may be another, etc.

V.

V. FINDINGS FROM PHASE B: THE SURVEY OF 416 VILLAGES

As a result of field-testing the data collection instruments, extensive revisions and additions were made (Phase A). Next, the nation-wide survey, Phase B, was launched according to plan. The progress, success and findings thus far are presented in the remainder of this chapter.

Scope of the Data Collected:

At present, data have been collected in 25 of the nation's 50 districts and in the Federal Territory. In each district, data have been gathered from a stratified sample of 16 villages. Thus, data are now available from some 400 villages located in all four provinces. In each village a team of four professional teachers (2 male and 2 female) conducted some 30 interviews and tabulated or scored some 600 items of information. The data were gathered in the various sectors described in research design of the foregoing chapter, and the interviews were held with village leaders, parents, teachers, primary school pupils, dropouts and nonattenders.

The timing and quality of the data collection left something to be desired. Because of administrative clearances and logistical problems such as travel funds, etc., none of the BEPM staff were

able to go to work in their assigned provinces until after mid-May, 1976. The primary schools in the selected sample were scheduled to close for the summer on dates beginning the first of June and running up to mid-June. Thus, relatively little time was available to orient district and provincial education officers, train facilitators and teachers, and collect the necessary data which in itself was to take a full week in any given village.

In spite of these difficulties, the data were gathered from every assigned village in every one of the 25 districts. In some villages, much of the data were missing and in some, it was obvious that the forms had been filled out carelessly or without closely following directions. This was particularly true in some parts of Baluchistan and in a small scattering of villages in the other provinces. Nevertheless, the data were successfully collected, even though some forms were delayed for a time because of heavy rains, etc. In the research designer's considered judgment, the data collectively were about 85 percent accurate, overall, after tabulations.

Assessment of Managerial Competence through the Data Collection Exercise.

In the research design of the study, it was assumed that some measure of management capability at the provincial, and district levels,

could be gleaned from the data collection exercise. In terms of the criteria outlined, the following summary evaluation seems warranted:

<u>MEASURE OF CRITERION</u>	<u>JUDGED LEVEL OF PERFORMANCE</u>	<u>SUMMARY JUDGMENT</u>
1. The completed forms were properly filled out and returned on time	85%	Good performance in executing a major effort in a very limited time frame.
2. Results to reflect the support and cooperation of the provincial education departments	100%	Excellent response and cooperation.
3. Effectiveness of communication and level of cooperation to be reflected in the way instructions were issued to division and regional directors, district education officers, district inspectors, and high school teachers.	90%	Good initiation, communication, performance and follow up.
4. Transport and other logistics provided to expedite activities	90%	Cooperation evident in providing transports ranging from taxis to camels to each remote villages.
5. Prompt payments and reimbursements made to teachers facilitators, etc.	~~100%~~ 50	Compliance <i>less than</i> excellent as evidenced by issue of <i>one half</i> warrants through the Ministry of Education prior to the end of the fiscal year (June 30, 1976)

Progress in Data Tabulation and Some Tentative Conclusions

All the data from the 16 villages in each district have been tabulated on some 20 consecutive large pages of data. Included also is a table of intercorrelations among all of the scoreable elements of the basic questionnaire. These correlation coefficients have been routinely calculated by the Computer Centre of Islamabad University. Summary sheets have also been tabulated for all provinces.

A number of tentative conclusions or observations can be drawn from the data thus far compiled. Some of the more important of these are as follows:

A. FORMAL EDUCATION DIFFERENCES AMONG JURISDICTIONS:

Marked differences on a wide variety of measures were found among the villages within a given district, among districts, among districts within any given province, and among provinces. An examination of scores will illustrate some of the overall differences. Each score represents a compilation of some 20 to 30 observations or measures culminating in a kind of standard score where the range is from 1 to 100. Thus a score of 100 on a school building, for example, would represent a totally excellent building. A score of 80, very good; 50, average adequacy; 25 or less, poor or very poor.

One more consideration must be made of the following scores.

A boy's building score of 37 for the Punjab, for example, represents the average of all of the ratings on the school buildings for boys in 112 villages (7 districts). Similarly, a national score of 40 would represent the average rating of such buildings in a stratified sample of some 416 villages throughout Pakistan.

Table I presents these qualitative scores on the formal aspects of education in the rural villages of Pakistan. An examination of the Table shows some provinces score twice as high as others on some factors. Some of the notable tendencies depicted in Table I are: (a) boy's school scores tend to be consistently higher than girls schools in personnel and administration, in pupil attendance, and in the quality of buildings, (b) girl's schools tend to exceed boy's schools in the quality of the learning environment (curriculum); (c) Baluchistan tends to be lowest in all measures and Sind tends to be highest. It may appear as a contradiction that boy schools have better buildings and teachers and administrators, but are inferior to girls schools in curriculum offered. One explanation for this could feasibly be that while the women teachers are less well trained and work in facilities that are less well built and administered, that actually the women work best, establish a better rapport, and do a better job of promoting the learning of these very young children.

QUALITATIVE SCORES ON FORMAL EDUCATION
IN RURAL VILLAGES IN PAKISTAN
BY PROVINCE AND TERRITORY, 1976

Measure	NWFP	Baluchis- tan	Punjab	Sind	Fed. Terri- tory	Nation wide
SCHOOL PERSONNEL AND ADMIN: (22 items: training, residence, policies supervision, finance, etc.)						
BOYS	53	40	46	62	54	51
GIRLS	51	28	42	58	46	45
SCHOOL BUILDING: (22 items: Structure, size equipment, furniture, site appearance, etc.)						
BOYS	39	35	37	45	45	44
GIRLS	38	28	35	45	29	34
LEARNING ENVIRONMENT: (18 items: equipment materials, subject methods, use of environs, integration of subjects.)						
BOYS	32	26	28	49	35	34
GIRLS	33	37	33	51	29	37
PUPIL ATTENDANCE: (Percentage attendance from census Population)						
BOYS	54	26	54	51	51	46
GIRLS	16	12	40	22	35	22

B. DIFFERENCES IN NONFORMAL EDUCATION AND COMMUNITY FACTORS

Table 2 presents the scores on nonformal education, community factors, and some comprehensive measures taken on rural villages in Pakistan. Here again, the variations among the provinces is pronounced. The following tendencies appear to be shown in Table II: (a) scores tend to be consistently low in nonformal education and in village management; (b) Baluchistan tends to be lowest in all scores and Sind highest (c) all provinces achieved consistent average scores in personal dynamics.

C. PRINCIPAL CAUSES OF DROPOUT

In the considered collective judgment of the four data collectors in each village, based on interviews, scoring school and village elements, etc., the overwhelming preponderant cause of primary school dropout and non-attendance was poverty. This factor included such other comments as unemployment, cost of school, or absolute poverty, and it was shown as by far the leading cause in every province and in Islamabad. Other causes cited nation-wide in rank order, but with far less frequency, were (1) negative attitude or lack of parent interest; (2) youngsters needed for work in the fields, etc.; (3) parent's ignorance or illiteracy.

TABLE II - QUALITATIVE SCORES OF NONFORMAL EDUCATION,
COMMUNITY FACTORS, AND COMPREHENSIVE
MEASURES OF RURAL VILLAGES IN PAKISTAN
1976

Measure	NWFP	Baluch- istan	Punjab	Sind	Federal Territo- ry	Nation- Wide
<u>NONFORMAL AND FORMAL EDUCATION</u>						
1. NONFORMAL EDUCATION (18 items: Koranic schools family factors, organizations, activities, media, library materials)	13	14	14	19	20	16
2. PERSONAL DYNAMICS (25 items: attitudes, abilities, health, motivation)	47	46	53	55	48	50
3. DEVELOPED ADULT RESOURCES (Illiterates, Primary, Middle & High School Graduates, etc.)	26	30	46	32	32	33

COMMUNITY FACTORS

1. <u>Resources:</u> (9 categories: products, industries, occupations, facilities, talented persons, services, etc.)	46	29	48	53	44	44
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TABLE II - QUALITATIVE SCORES OF NONFORMAL EDUCATION,
COMMUNITY FACTORS, AND COMPREHENSIVE
MEASURES OF RURAL VILLAGES IN PAKISTAN
1976 (Contd.)

Measure	NWFP	Baluch- istan	Punjab	Sind	Federal Territo- ry	Nation- Wide
<u>COMMUNITY FACTORS</u> (Contd.)						
2. <u>Community Development:</u> (15 items: water system, drainage, transporta- tion, streets, electrifi- cation, community action)	29	31	33	31	29	31
3. <u>Village Management :</u> (21 items: planning, leadership, organization, cooperation; participation, communication)	14	15	20	36	15	20
<u>COMPREHENSIVE MEASURES</u>						
1. <u>Total School Community</u> <u>Score (Cumulative total</u> <u>of 10 scores)</u>	325	274	347	417	350	341
2. <u>Gross Product of</u> <u>Education Per Capita</u> (Index of developed human resources)	9.7	12.9	12.0	12.2	10.4	11.7

In a search for empirical -- non opinion -- factors related to pupil dropout, a series of correlations were calculated. From the correlations shown in Table III, the only measure consistently and significantly related to pupil attendance was total village development. Thus, in the most developed villages pupil attendance was best. In the least developed villages, pupil dropout was highest.

D. SCHOOL BUILDINGS:

The lack of school building is a cause for non attendance (Rank 5), particularly for girls when no separate facility is available. Another aspect of this problem was investigated; namely, does the quality or goodness of a school building and physical facilities have any effect on pupil attendance? The answer to this question had to go beyond mere opinion. Therefore, in addition to the opinions or judgmental causes of dropout, some empirical relationships were explored. A table of the nation-wide correlations is presented in Table III. Nation-wide, the quality of the school building and facilities was found to have no significant relationship to pupil attendance.

E. SCHOOL CURRICULUM AND PERSONNEL:

In gathering opinions about the principal cause of primary school drop-out, both the school curriculum and the adequacy of teachers was mentioned infrequently. Here again, empirical evidence was sought

TABLE III - INTERPRETATION OF CORRELATION MATRIX

If the coordinate box of six scores had a particular combination of significant scores and number values, it was assigned a level of "operational significance" as follows:

 = STRONG
OPERATIONAL
SIGNIFICANCE

The coordinate box contained 4 provincial scores that were statistically significant beyond the 1% level of confidence and a national correlation of more than .50.

 = MODERATE
OPERATIONAL
SIGNIFICANCE

The coordinate box contained 3 provincial scores that were statistically significant beyond the 1% level of confidence and a national correlation of more than .40.

 = WEAK
OPERATIONAL

The coordinate box contained 2 provincial scores that were statistically significant beyond the 1% level of confidence and a national correlation of more than .26.

These indicators were diminished from strong to moderate or from moderate to weak in all coordinate boxes involving the Total Village Score or the Gross Product of Education Score, since these were derived from a composite of scores.

V-12
TABLE III (cont.) CORRELATION MATRIX OF SCOREABLE VILLAGE MEASURES

RESO BDL LEAK ATTD CDDP NFED PERS V.MGT P.DYN A.RES T.VILL GPE

RESO	1.00
BDL	.10 -.08 -.22 -.37X .06 .31
LEAK	.12 1.00

NW	.29 -.32 .43 .92X .06 .13
ATTD	.47 -.44X -.14 -.34X -.37X -.36
CDDP	1.00

ATTD	.03 .00 -.12 -.25X .00 -.41
CDDP	.01 .01 .15 -.19 -.11 -.45
NFED	.12 .05 -.23 .01 -.03 -.21
PERS	1.00

CDDP	.35X .13 .57X .37X .24
NFED	.45X .02 -.28X .36X .41
PERS	.59 .38X .41X .42X .39
V.MGT	.12 .10 -.17 -.10 -.08
P.DYN	1.00

NFED	.31 .38X .37X .40X .14 .28
V.MGT	.26 .34X -.22 .28X .20 .20
P.DYN	.46 .61X .16 .48X .34X .44
A.RES	.09 .11 -.10 .02 -.00 -.03
T.VILL	.57 .57X .47X .56X .52X .90X
GPE	1.00

TABLE 3. CORRELATION MATRIX OF 12 PRIMARY-SCHOOL-VILLAGE MEASURES IN PAKISTAN, BY PROVINCE, 1976

LEGEND

1. NATION-WIDE : 416 OBSERVATIONS
2. N.W.F.P. : 88 "
3. BALUCHISTAN : 80 "
4. PUNJAB : 112 "
5. SIND : 128 "
6. FED TERRITORY : 16 "

/ = 5% LEVEL OF SIGNIFICANCE

X = 1% LEVEL OF SIGNIFICANCE

☒ = STRONG OPERATIONAL SIGNIFICANCE

☐ = MODERATE OPERATIONAL SIGNIFICANCE

□ = WEAK OPERATIONAL SIGNIFICANCE

V-12(a)

PERS	.21 - .09 - .23 .09 .10 .39	.24 .16 .05 - .09 .17 .48	.47 .30X - .15 .03 .42X .71X	.24 .17 .09 .05 .15 - .26	.37 .16 - .20 .09 .21 .66X	.26 .24 - .10 .05 .23X .62X	1 2 3 4 5 6	1.00					
V.MGT	.26 .14 .33X .13 .25 .21	.21 .08 - .01 - .01 .21 - .22	.43 .16 - .20 .24X .40X - .04	.13 .06 .02 .12 - .01 .49	.51 .18 - .01 .36X .48X .67X	.57 .43X .30X .35X .54X .62X	1 2 3 4 5 6	1.00					
P.DYN	.29 .33X .08 .17 .11 .64X	.12 .18 - .02 + .26X .27X .24	.38 .25 .25 .36X .40X .08	.13 .01 - .27 .10 .13 - .46	.40 .41X .21 .31X .41X .22	.31 .34X .38X .25X .21 .28	1 2 3 4 5 6	1.00					
A.RES	.10 - .07 .00 .01 .17 - .16	.00 .10 .12 .13 .04 - .12	.07 .27 - .06 .13 .09 .32	.15 .15 .08 .16 - .04 .24	.12 .20 .00 .08 .20 .38	.18 .20 - .01 .21 .23X .48	.05 .27 .12 .02 .03 .42	1 2 3 4 5 6	1.00				
T.VILL	.51 .49X .44X .39X .34X	.46 .44X - .03 .38X .41X	.68 .73X .26 .58X .61X	.40 .30X .07 .28X .23X	.79 .72X .43X .53X .67X	.57 .79X .54X .58X .52X	.59 .38X .32X .25X .41X	.53 .26 .35X .37X .59X	.55 .45X .53X .50X .59X	.32 .41X .23 .46X .34X	1 2 3 4 5 6	1.00	
GPE	.22 .36X - .06 .14 .34 .66	.12 .33X .07 - .08 .18 .34	.24 .48X .02 .15 .27X .12	.08 .05 - .03 .03 .11 - .30	.27 .71X - .07 .29X .44X .65X	.39 .66X - .04 .14 .47X .64X	.15 .06 .06 .04 .20 .54	.31 .22 .05 .45X .47X .27	.27 .56X - .08 .22 .31X .70X	.04 .23 .06 - .08 .13 .17	.32 .76X - .14 .24X .48X -	1 2 3 4 5 6	1.00

out to show whether the quality of the school curriculum or the quality of the school's personnel was related to pupil attendance or dropout. On both measures, nationally, no significant relationships were found. See Table III. However, a significant correlation was found between the quality of school personnel and the total development of a village. Thus the best teachers were found in the most developed villages. Similarly, the best learning environments (curricula) were found in the most developed villages and where the best personnel tend to be.

F. TOTAL HUMAN RESOURCES DEVELOPMENT

An indicator (GPE) was developed in the data collection to assess the extent of human resources developed -- formally and informally -- in each village, district, and province. Such development appears to be more closely related to village attitudes, and total village development than to any school or formal education factors.

G. PUPIL CHARACTERISTICS:

Matched pairs of pupils were made where one had recently dropped out of school and the other had remained in school. A high degree of consistency in the data revealed that in comparison with those staying in school at every class level the dropout youngsters:

- a) Rate lower on personality and temperament (i.e., health, intelligence, peer relations, social class/caste, self concept, work attitudes, etc.)

- b) Rate lower on family factors (parent attitude toward education, relationship with family, income, stability, etc.)
- c) Rate much lower on school success factors (i. e. attendance, achievement, aspirations, relationship to teachers, etc.)
- d) Rate much lower on skills and knowledge (i. e. read Urdu, read Arabic, write Urdu, add, subtract, multiply, divide). Pupils both in and out of school were found to have a low level of performance in "fix-it skills" talent development, and handicraft skills.

H. DISTANCE FROM THE DISTRICT CENTER AS A FACTOR IN SCHOOL - VILLAGE QUALITY MEASURES

It was assumed that villages closer in distance to the district center would have better schools, more resources, more village development, etc. Testing such a hypothesis from the data gathered nation-wide, however, refuted this hypothesis. On the basis of a series of "t" tests, no significant difference was found between the quality scores of those remote districts and those in closer proximity to the district center.

VI - FINDINGS FROM THE INDEPTH STUDY OF FOUR
VILLAGES --- PHASE C

Simply gathering data and publishing national studies on primary school dropouts with relationships to curriculum, school buildings, administration, etc., (Phase B) appeared to meet the minimum research requirements of the Pakistan study. However, it became a challenge, to go into depth in some selected villages to see if it were possible to begin solving the dropout and other primary education problems in the process of doing the necessary research. A procedural model to do the indepth village studies was formulated with the BEPM staff. To see if the model would work and to "debug" it, four different types of villages were selected for a field test. Data gathering instruments were formulated, village teachers and outside-of-village facilitators of both sex were trained, and the field testing proceeded.

Male village committees and counterpart female committees representing all social classes were convened. These committees in each village were taken through a needs assessment, the selection of a "best" alternative of solution-strategy, and through a planning session for implementing their solution to resolve their needs, using their resources. Detailed results of the field test are described in the following paragraphs.

VI - 2

Intensive Research in Four Field-Test Villages

During the last week of February and first week of March almost daily research and supervision of BEPM staff and facilitators was required in the four villages under study. All villages were within a one-hour drive from the BEPM.

The field testing took place in the following four villages of the Federal Capital Area:

- | | |
|-------------------|--|
| 1. Tarlai Village | This village is the IRDP Markaz headquarter and has been exposed to frequent interventions by various agencies of the Government. |
| 2. Gangal Village | This village is situated near the Islamabad airport and is in close proximity to Rawalpindi. A large number of people from this village work in Rawalpindi and Islamabad in Government offices or in shops or as labourers. |
| 3. Chirah Village | This village is located near PINSTECH and presents an interesting case study as far as the influence of a national project like the PINSTECH is concerned. The village is a conglomeration of a number of a scattered settlements. |
| 4. Pind Begwal | Pind Begwal represents a backward and isolated village comprised of a few small and impoverished settlements. |

Local Teacher's Performance

The following local teachers were involved in the field test.

VI - 3

<u>Village</u>	<u>Male Teacher</u>	<u>Female Teacher</u>
Tarlai	Second Headmaster Middle School	Headmistress Primary School
Gangal	An unemployed Graduate	Headmistress Primary School
Chirah	Headmaster Middle School	Headmistress Primary School
Pind Begwal	Primary School teacher	Headmistress Primary School

Generally, all the teachers involved in the field test exhibited a high level of motivation and ability in receiving the orientation, collection of factual data, organising committees and scheduling of meetings and serving as secretaries of the Needs Assessment Committees. The teachers appeared to be enthusiastic from the experiences gained in (i) collecting information about the village; (ii) in interacting with the village people; (iii) in organizing committees and scheduling meetings; (iv) in identifying and analysing the village needs; (v) in examining alternative solutions; (vi) in knowing and utilizing community resources; (vii) in the creation of local planning and management structures; and (viii) in the formulation of the village development plans.

The village people also had developed a reciprocal feeling for the teachers who for the first time were really known and who appeared to be genuinely interested in educational development of the community.

The exercise provided immense opportunities to the local teacher to acquire a respectable place in the village.

Facilitator's Performance

Apart from the four staff members of the Bureau of Educational Planning and Management who acted as male Facilitators, four lady teachers from Islamabad educational institutions were given training to perform as female facilitators. All the facilitators were highly successful (i) in conducting the meetings of the village Need Assessment Committees; (ii) in getting the needs identified, analyzed, and validated; (iii) in getting alternative solutions examined and in having the best solution selected; (vi) in getting the local planning and management structure created; and (v) in having a five-year development plan formulated from the Needs Assessment Committees. The Facilitators viewed the experience as immensely rewarding which helped in reinforcing their faith in the people and their conviction in the possibilities of bringing about rapid socio-economic development.

Motivation of the Village People

The model proved to be highly successful in motivating the village people for their self-development. In fact, the general impression carried from the field-test in the four villages was that the people were just waiting to be reached. The people who were

members of the Needs Assessment Committees in particular demonstrated keen and sustained interest throughout the exercise. Of particular significance was the enthusiasm among the women folk. It was perhaps the only time in their lives when they were regarded as important members of the community and their opinions were sought and given weight.

Participatory Planning

The village people were found to be highly intelligent and articulate in defining and analysing their needs, in examining alternatives, and in formulating plans. Both the male and female Needs Assessment Committees were generally fairly representative of various interest groups. The participation of all the members of the Committees was spontaneous and vigorous.

Mobilization of Community Resources

The Facilitators were given clear instructions that their job was to motivate the rural people for self help through the mobilization of their own efforts and resources. They were not to make any promise for large Government investment. Instead, it was to be impressed upon rural people that the country's development could not be brought about through Government's meagre resources alone; each community

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possessed immense human and physical resources which could be utilized to make tremendous contributions to the national progress. Rural communities were backward because of lack of effort on the part of the people towards self-development. The village people were to be convinced that the mission of the Facilitator was only to assist them in planning for their community's development.

The response of the people was, by and large, heartening. They were ready to volunteer spare rooms and free time for starting various educational and social uplift activities. The ladies who knew knitting and sewing offered to teach these skills on their own machines. In one of the villages, work on cleaning and levelling of hitherto muddy and broken streets, through local effort, got started during the exercise. In some villages people were ready to have the boys and girls taught together in the primary classes under the female staff. In others, double shifting was readily accepted. In one of the villages, the people said they would neither ask for more staff nor for building but only for the permission to start class VI in the existing school. All the four villages have indicated precisely as to what community resources could be made available for starting various development projects.

Creation of Planning and Management Structure

At present, the structure of local self government does not exist in the rural communities. As the Needs Assessment Committees moved towards preparation of development plans, they realized the need for creating a structure which would provide organization for planning and implementation of development programmes. Thus, each village was able to constitute a central Planning and Management Committee and sub-committees for different settlements within the village and also technical working committees for various sectors such as education, health, construction, etc. The Planning and Management Committees in each village were ready to assume responsibility in terms of ensuring enrollment of all the children in primary classes, or of illiterate adults in literacy centers, etc.

Formulation of 5-Year Village Development Plan

The Planning & Management Committees of the four villages were able to produce broad outlines of their plans. They had indicated as to which projects they would like to complete, in how much time, what community resources would be available and how the projects would be completed. These plans were examined in the Bureau from a technical point of view and were then discussed with the village Planning & Management Committees before they were

finalized . Some parts of the final plans of the four villages are presented in the appendix.

Village Life and the Delivery of Services

The indepth study of needs, resources, solutions to village problems and planning with the men and women of the villages revealed a common pattern of confusion and non-coordination of services. The needs expressed and documented were simple, basic human needs: health, literacy, vocational skills, religious knowledge, etc. The services available in the villages to meet these needs were sparse, isolated, fragmented, ineffective, and unresponsive to the broad needs of human beings.

For example, a common pattern of identified needs was literacy and health. The principal mechanisms in the villages for meeting the literacy problem were the village primary schools -- girls and boys -- and occasionally some kind of unrelated adult education program. Village health services were often nil, but an occasional village would have a dispensary. The facts are that a large proportion of the primary school age children are chronically unhealthy and diseased. A frequent reason given for pupil drop out or nonattendance at school was illness. For those who attend school in spite of illness, aside from the contagion factor, it is not difficult to see that a youngster with pain, itching,

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nausea, or a half-dozen other such maladies is not an efficient learner. This is particularly true in the austere and barren learning environment of the primary schools.

The starting discovery to be made is that the school is unconcerned with the health of its pupils. It may teach an academic unit on health somewhere in the curriculum but as far as giving even the most rudimentary kind of health services to their pupils, it does not. And even more surprising, teachers and administrators believe it cannot. Why not? Because health is under the jurisdiction of the Ministry of Health and schools are under the Ministry of Education. Let pupils perish, the lines for service are not to be violated. Even more surprising -- and appalling in its implications -- is that this attitude is shared up into the higher levels of the ministries themselves. Unbelievable? Yes, but, nevertheless, a significant part of the reality of village life and a factor to be dealt with in solving the problems of village education.

The cited example of health and education is only one small dimension of this rigid compartmentalization of services. While we may be dealing with a small village made up of a limited number of human beings, the mechanisms for service -- agriculture, adult education, construction, family planning, health, education, etc. -- are unrelated and bureaucratically standardized to such an extent that they virtually fail

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to fuction. It would be difficult to find a more effective way to misuse the limited local resources -- destroy local self-help initiative -- or strangle and paralyze services to these village people.

VII - DESCRIPTIONS OF THE EXPERIMENTS WITH
VILLAGE PRIMARY SCHOOLS
CONDUCTED IN THE PROVINCES AND FEDERAL
CAPITAL TERRITORY

In December 1976 and January 1977 a brief survey was conducted of a dozen or more village schools in the various provinces and in the Federal Capital Territory. At the conclusion of each survey, a small number of the surveyed villages were selected for a variety of experiments with the primary schools therein. While each experiment attempted to test the effectiveness of different types of school innovations, the basic hypothesis in each experiment was to see if applying certain changes in a village-school could be successful in doubling the existing enrollments of male pupils and in tripling the enrollments of female pupils.

In each village a small amount of resources were channelled into the schools to initiate and expedite the experiment. The amount of such external resources varied between Rs 2,000 to a maximum for any one village school of Rs 10,000. Of necessity, each village-school experiment was cast into a time frame of 3 to 4 months for measuring results. Each experiment was carried out through the regular administrative and school structures and personnel. Thus each experiment was also a test of the management capabilities and effectiveness of the district and local school administration. The remainder of this section provides a brief description

of these various village-school experiments.

A. EXPERIMENTS IN PESHAWAR DISTRICT, N.W.F.P.
(4 Villages)

1. Village of SHAB QADAR The present boys school is in a large compound with a surrounding boundary wall, a few permanent buildings not in good repair and a dozen or more lean-to's or temporary classrooms made of brick or wooden uprights and thatching for roofs. The boys' schools currently enrolls 659 boys and has 19 teachers. The girls' primary school has 150 enrolled with a staff of 5 teachers. It is housed in a very dilapidated, dangerous building which is rented and has no compound.

The contract in this village will attempt to double boy enrollments and triple girl enrollments by shifting the girls' school into a large rented building. In the boys' school some repairs to buildings and some additional temporary lean-to's will be erected by teachers and upper class students. Some additional instructional supplies and equipment, such as tools, sports equipment and sewing machines will be provided to both schools for curriculum enrichment.

2. Village of MIAN ISA The boys' school is using some 3 small buildings on a good size compound. It enrolls 400 boys and uses 7 male teachers and is located on the outskirts of the village on

the road. The girls school is in a donated building in good condition with a good size compound and boundary wall. It has only one woman teacher who comes daily from Shab Qadar.

By agreement, the boy enrollment will double to 800 and the girl enrollment more than triple to over 100. For the boys school, the faculty and students, using parent help will put up a central, temporary large room (pole uprights and thatching for roof) to house the additional students. One or two local male teacher aides will be hired as the enrollment nears the target number.

The girls school boundary wall will be repaired by the local donor and some assistance will be provided for him to construct a latrine. An additional teacher (a local matriculate) will be employed as an aide and one sewing machine will be purchased for the schools' handicraft classes.

3. Village of TANGI A middle school for girls is housed in a rented building near the outskirts of the village. It has 5 teachers and an enrollment of about 60 girls. The girls primary school is located on the other side of the village in a very inadequate rented building that allows for no expansion. It enrolls 300 girls and has 5 teachers. There is one other small primary school for girls which occupies a rented house, enrolls 20 girls and has one teacher.

There are two boys' primary schools. One is centrally located in a large compound with adequate buildings and a boundary wall for its 700 boys and 16 teachers. The other boys school is located some 300 yards outside the village with a new 5-room government constructed building and plenty of land. It enrolls 230 boys and has 4 teachers.

By agreement with all concerned parties, the large centrally located boys schools will be retained. At the new building and site located outside the village, temporary classrooms (pole uprights and thatching for roofs) will be erected by the male teachers and upper class boys as a part of the school program. An effort will be made to increase the boy enrollments to some 1500 with the existing number of teachers.

The two girls' primary schools will be moved out of their rented buildings and into the large girls middle school site. It is believed that with such a facility, there will be no difficulty in tripling the girls' primary school enrollment to over 1000 and that an adequate number of teachers will be already available from the consolidation.

4. Village of RAJJAR The boys schools are three in number but all located on the same large site. The schools are relatively new and well constructed with 2 or 3 classrooms in each. Curiously enough,

each of these schools has its own headmaster and operates classes I to V independantly. To handle the overflow of pupils, some temporary classrooms (upright poles and thatching) have been erected centrally on the compound and are jointly used by all three schools. The enrollment and staffing in each school is:

<u>BUILDING</u>	<u>BOY ENROLLMENT</u>	<u>MALE TEACHERS</u>
# 1	149	5
# 2	150	5
# 3	130	4
<u>Total</u>	<u>429</u>	<u>14</u>

The girls primary is located adjacent to the boys' schools compound. It has a new 7 room building, a very large compound and is completely surrounded by a magnificent, high, brick boundary wall.

It was agreed by all parties that boy enrollments could be practically doubled and girl enrollments tripled. This was to be done by consolidating all 3 boys schools into one shcool, with one headmaster and utilize the buildings and staff more efficiently, i. e. putting class I in one building, II and III in another, and IV and V in another. Additional temporary classrooms would be made by erecting lean-to's against the outside of the boundary wall around the girls' school. For better control, some kkind of temporary boundary wall would be finished around the boys' compound using

teacher and student labor.

In order to triple the girl enrollment to over 600, some instructional equipment (i. e. sewing machines) would be furnished and additional temporary classrooms would be thrown up against the inside of the boundary wall.

B. EXPERIMENTS IN LAHORE DISTRICT, THE PUNJAB
(3 Villages)

5. Village of MURIDWAALAA The boys schools is housed in government owned building which is located outside the village and has the vestiges of a disintegrated boundary wall of mud. The building has one classroom with an office (closet), is brick construction with a roof in urgent need of repair. Some 40 boys are enrolled but no teacher is assigned and the peon is "holding" school temporarily.

The girls' school is within the village and housed in a rented building which is very inadequate for expanding enrollment. Six teachers are assigned and the enrollment is 53 girls and 7 boys.

The agreement with this village provides that the roof be repaired, a boundary wall constructed (mud), two latrines be made and a handpump for water be installed in the boys' school, together with two sheds put up as lean-to's on either side of the boys' school. Then all of the girls with their teachers will move into the boys school. Mixed classes will be held in the first three classes

and separate classes held for class IV and V. Boys in these upper classes will be located in the present girls' school building. Two sewing machines would be added to the curriculum for regular classwork and for evening adult education. All concerned agreed that with village support, enrollment of boys and girls would be tripled very quickly.

6. Village of NEEAZ BEG Housed on a very large compound within the village, complete with boundary wall and a large, solid brick building is the government-owned boys school with 342 enrolled and 7 teachers assigned.

The girls' primary school is housed in a government-owned building with a middle school. About 200 primary school girls, 17 boys and 18 middle school girls are enrolled and 14 teachers assigned.

The agreed plan for adding 200 more boys and tripling the girls' school enrollment was to do some refurbishing of the boys school plant, and add curriculum improvements and adult education in the girls' school. Specifically, the boys' school would be given a new entrance, in order to create a classroom, the roofs would be repaired in 4 other classrooms, the boundary wall repaired and extended. The girls' school would acquire 2 sewing machines, cloth (for uniforms), free textbooks for the newly enrolled only, and a local sewing teacher (aide) for the regular school program and for evening adult education.

7. Village of DIINAA NAHT The boys and girls schools are housed in government -owned buildings of good repair and are adjacent but located midway between two villages. The girls' school enrolls 23 with 4 teachers assigned (all from Lahore) and the boys school enrolls 34 with one assigned teacher.

It was agreed that boy and girl enrollments would triple using the following strategy. Boys and girls schools were to be combined under one administration and a boundary wall (gardenia) set up around the entire large compound. The land within the compound would be filled and levelled into a school farm as there is water (handpump) and drainage available. Seeds and fertilizer for an initial crop would be furnished. Two sewing machines would be made available and a sewing teacher (aide) made available from the villages for regular classwork and adult education. Classes I, II and III would be mixed. The separate upper classes for boys would be housed in the present girls school building which stands apart from the other four classroom structures. Adult education for males (literacy) would be held in this building in the evenings and a teacher will be provided.

C. AN EXPERIMENT IN KARACHI DISTRICT, THE SIND
(1 Village)

8. Village of NAJI NA THO LANDI There is only one primary school in this village. It is a boys' school, meaning that it is under the jurisdiction of the male D.E.O. It is housed in a rented building of

relatively good quality, has 9 teachers and enrolls 168 boys and 78 girls. There are no girls enrolled in classes IV and V. Two of the teachers are women who teach separate sections of less than 10 girls each in class II and class III.

It was agreed by all parties -- D.E.O.s male and female, assistant D.E.O.s, headmaster and B.E.P. staff members -- that the boy enrollment could be doubled and girl enrollment tripled by making the following changes: (a) Getting a joint, cooperative management relationship between the male and female D.E.O.s for the supervision of the school; (b) adding two classrooms by some temporary construction at the adjoining sides of two existing buildings on the compound -- if needed; (c) mix classes I, II and III under male teachers and hold separate classes IV and V, where the two women teachers would be assigned to the female classes; (d) introduce curriculum innovations of teaching the Koran, handicraft (2 sewing machines), and carpet-making, for which 2 local teacher aides would be obtained; and (e) adding some furniture items, such as, an elmira, floor covering; and (f) providing free textbooks to the new entrant students.

D. EXPERIMENTS IN THE FEDERAL CAPITAL TERRITORY (9 Villages)

The initial four of the following villages were selected in a cluster in order to experiment with revolving sets of library books

and a decentralized management system as well as with the experimentation within each separate village. One headmaster was responsible for the experimentation in his own school but also for the overall logistics and monitoring of the experimentation in the schools within the other three villages.

One other type of experimentation with "projects" was widely used in the Federal Territory Schools. The purpose of a school project is primarily to provide practical, real-life experiences within the school curriculum but as a secondary purpose to generate resources on a continuing basis for school use. These projects usually require a small initial investment, which the school in most cases agrees to repay over a few months' time. Generally the school officials have wanted the project in order to sustain a program of scholarships or the acquisition of consumable instructional materials.

The most common type of project selected has been sewing. This has required the investment of one or more sewing or embroidery machines and some cloth, plus in some cases the short term employment of a local person to teach sewing skills in the regular school program and in connection with some adult education literacy program. In some schools some of the articles sewn were expected to be sold and the revenue therefrom used to purchase more cloth, thread, machine maintenance, etc. Part of the sewing project was to make school

clothing as scholarships for the indigent youngsters of the village who otherwise were unable to attend school. The projects proposed are varied, depending upon the interest, expertise available, enthusiasm of the school staff, space available to the school, etc. They range from chair finishing to a school farm to soap making and raising poultry.

9. Village of LOI BEHR This village had the highest estimated percentage of the age group attendance in the primary schools: 40 percent of the boys and 33 percent of the girls. The boys primary school is housed with a middle school in a building of good repair. It enrolls 136 boys in the first five classes with 6 male teachers. The girls school is about half-mile walk through open fields from the boys school. The building for the girls' school seemed adequate for its existing enrollment of 101 girls. It had 5 female teachers assigned. The village has a school committee -- institutional council -- that meets regularly.

It was agreed by all parties concerned that the enrollments of both schools could be doubled through their efforts and by making a number of modifications in the schools. As far as the teaching staff was concerned, it was assumed to be adequate to handle the increased enrollments. To provide building adequacy, the school committee agreed to add one classroom on to the end of

the existing boys building and secured permission to use the mosque across the road from the school as a classroom for religious instruction. For the girls school the committee agreed to add 3 classrooms by erecting sheds against existing walls.

The boys schools accepted a furniture finishing project and the girls school initiated a sewing project together with a mini-bazaar for school parents and patrons. Both schools were to initiate a small health and first aid unit, a revolving library book distribution system and adult education programs. Local persons were to be employed on a part-time basis as adult education teachers.

10. Village of GHAGARI The girls school is in one room of a donated (part) building with 3 teachers and about 48 enrolled. The boys school enrolls about 50 boys and uses a grove of trees 1/4 mile away as its school. (There is a mud room used for storage). The former one-room boys school caved in during the last rains. The villagers have donated land near the highway for another school.

All parties agreed that some changes would assure a doubling of enrollments. The headmaster was to get permission for the remainder of the girls school building (1 and a 1/2 more rooms) and clear the enlarged school compound and build a higher boundary wall. Then a shift would be made of the boys in to the girls' school into mixed classes. The villagers will form a men's and a women's education

committee and are interested in a sewing machine project (Headmistress can sew). Some sports equipment will be provided and womens adult education classes started.

11. Village of DHAHALA This village is located 2 miles by foot beyond Bura Bangial (3 miles from Lohi Behr). It is composed of very scattered settlements.

The village now enrolls 40 girls and 117 boys and has 2 good substantial school buildings, widely separated. The girls' teacher had not been at school for 4 days. The boys school has two rooms, a tidy compound and plenty of available land adjoining. These schools are administered by the headmaster at Lohi Behr.

The assistant director agreed to put another teacher (from the village but teaching elsewhere) at the girls' school. The villagers said enrollment would jump to 100. The materials for curriculum improvement and adult education were to be provided for and administered by the Headmaster of Lohi Behr. Girls' school sewing instruction (and machine maintenance) was to be given by a local tailor. The project is to provide one machine immediately, another when 60 more girls are attending and a 3rd when 30 more are in attendance. The Boys school will do a school garden project. Research funds will pay for seed, fertilizer, tractor, levelling, etc.

12. Village of BURA BANGYAL This village is located about one mile by foot beyond Lohi Behr. It is composed of very scattered settlements.

The village has only one school (2 rooms) with a tidy compound and an enrollment of 80 boys and 3 girls. The school has two male teachers. One of the classrooms was full of beds, etc. because the roof leaks. This school is administered by the headmaster of Lohi Behr.

It was agreed that the villagers will construct one more classroom on their own and will repair the roof. Boy enrollments will rise some (to at least a 100) and girl enrollments will rise to 80. When an additional 20 girls are attending, 1 sewing machine will be provided; when 45 are attending a 2nd machine; and when 75 are attending a knitting machine will be provided. The villagers have someone who will teach the sewing and handicrafts and someone for the health unit. Curriculum improvement and adult education materials will be provided through the headmaster at Lohi Behr.

13. Village of JAGIOT This village has a new boys' school on a dirt road. It is structurally all right but already overcrowded with 250 boys. The school has 3 classrooms plus remnants of an old building on the same site. There could become 3 more classrooms. A girls' school is 1/3 mile walk and enrolls 112 girls. It is housed in an old government building and has 2 classrooms. Present enrollment is at school's

building capacity.

It was agreed by all concerned parties that the boys' school enrollment could be doubled using the three additional teachers already assigned to the school (agreed upon by the Assistant District Inspector) and by utilising the old buildings present on the compound. Curriculum enrichment materials and health and first aid supplies will be furnished. The headmaster and the school committee wanted to start a school project in soap-making in the boys school and a sewing project in the girls school. Adult education programs were to be launched for both men and women in the village. The girls school was to triple its enrollment by renting an additional building in the village (available) and by using the two additional female teachers already assigned to the school. This was agreed upon by the Assistant District Inspector.

14. Village of PIHO NT This village has a new 3-room government built boys school in which there are 3 teachers and 47 boys. The building however does not attract much attendance because it is located on a steep hillside at a considerable distance from the village and has no amenities (i.e. water, latrine, electricity, etc.), no playground, etc. The girls school is more centrally located but housed in a small, mud, rented building and utilized at least to capacity with 51 girls enrolled and 3 teachers. The village has a school committee that meets regularly as a part of the village

development committee.

After discussions with the village opinion leader and prominent landowner, he agreed to donate his new centrally located spacious home, with all the amenities and sufficient playground site, to become the village school for all children and an adult education center for women in the evenings.

It was agreed that enrollments would be more than doubled, that the present female staff, together with a local woman teacher aide for handicrafts, would be an adequate staff. The boys school was to be converted into a pilot-type of technical middle-school with one reassignment to the existing staff. It would also serve as an adult education center for men in the evenings. Sewing machines, curriculum materials, health and first aid supplies, adult education literacy materials, and some handicraft tools would be supplied. A television set was rented for the new primary school's adult education program.

15. Village of SHAH ALLAH DITTA This village has two prominent factions -- rooted in castes -- and there is considerable unemployment in the village. Buildings for both boys and girls schools were back-to-back and relatively good. The headmistress is from Islamabad but 3 other teachers were local. Two treadle sewing and embroidery machines were used for drop-out and older girls who came to learn to sew and sold their work into 'Pindi.

It was agreed by all parties that both girl and boy enrollments could be doubled in existing plants with repairs and minor extensions. The school committee was to acquire Government land in front of the boys' school for a school farm. It would also begin an agro-tech middle-type school for drop-out boys and adult education for men and women.

Villagers agreed to Plan A* of 10 Rs for each new boy. The girl's school was to get 3 or 4 more sewing machines (Rs 500 each) and make school uniforms for indigent boys and girls.

* PLAN A consists of the following:

- #1. In a given village, find a possible income source for the school, such as (a) a school farm; (b) a market for simple weaving; (c) school store; (d) spectator games; (e) chicken farm.
- #2. Get the assigned number of teachers allotted to the school. Interview these and pick those with weaving, embroidery, farming, carpentry, mason or other skills who are willing to work and supervise students for part of the day.
- #3. Get the village school council to agree to a school development loan to be paid back from revenues generated by the school (see #4).
 - (a) After beginning date, loan fund will contribute Rs 10 for each new pupil enrolled and Rs 1 for each month the child is in attendance.
 - (b) After beginning date, each village child of school age (6-10 years)

16. Village of DREGHI MORI This village is located about 5 miles from Shah Allah Ditta and is a scattered village. There is no boys' school but one room adjacent to a mosque is under construction. There is a new girls' school with desks and chairs and an outhouse. The outhouse has been used as a classroom and for storage. About 30 girls are enrolled.

The school committee was to get permission to use the mosque and new room as boys school. A new boys' teacher (to be appointed by the assistant district Inspector) will donate land by the boys' school and will run a school-poultry farm. The girls' school can use 2 sewing machines (1 or more teachers know use) and will sew school uniforms for boys and girls (indigent 20%). Male school committee already exists. Attempts will be made to form a women's committee for the girls school.

All parties agreed that girl enrollment could be doubled. Boy enrollment will start from zero. Perhaps 25 can be brought in the first year.

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- absent from school for reasons other than illness, family event, etc., the parent (or village Committee) must pay the fund Rs 1 (allow not more than 10% illness).
- (c) All funds may be expended for authorized school items only, and approved by the project in advance.

17. Villages of DORA-NAU GHAZI These two villages are located on a main highway about 7 miles from Rwalpindi, one on either side of the road. A new boys' school (7 rooms) has recently been completed. It currently enrolls about 175 boys, uses 5 teachers but has two vacant classes. Villagers are apparently willing to mix boy and girl enrollments.

It was decided to put the school on Plan "A" and bring girls into the school. The school would mix classes I, II and III but hold separate classes for IV & V and bring in 2 lady teachers. The enrollment of the school will more than double in a 2-month period.

APPENDIX - A
NATIONAL SUMMARY OF RESULTS
ON THE SCOREABLE
FACTORS OF SCHOOL AND VILLAGE
DEVELOPMENT

I - RESOURCES - SUMMARY FOR NATION-WIDE

IV - ATTENDANCE

D I S T R I C T S						
Measures	Max. Score Possible	Ave. Village Score All Pakistan	Male Score		Female Score	Total
I-1 Major Products shipped	5	3.4				
I-2 Industries	10	3.5				
I-3 Occupations	10	7.2				
I-4 Public Facilities	15	8.7				
I-5 Talented Persons	20	6.5				
I-6 Spec. Equip. & Mach.	10	4.8				
I-7 Land Tenure	5	2.8				
I-8 Private Services	15	5.9				
I-9 Organizations	10	1.3				
Total Resource Score	100	44.1				
<u>ATTENDANCE</u>						
Boys:						
IV-Class I	10	6.3				
" II	10	3.4				
" III	10	2.4				
" IV	10	2.1				
" V	10	2.3				
Boys:						
Total Attend. Score	50	23.1				
Girls:						
IV-Class I	10	4.4				
" II	10	2.3				
" III	10	1.7				
" IV	10	1.5				
" V	10	1.4				
Girls:						
Total Attend. Score	50	11.2				
Total Attend. Score	100	34.3				

II - BUILDINGS - SUMMARY FOR NATION-WIDE

D I S T R I C T S						
Measures	Max. Score Possible	Ave. Village Score:All Pakistan	Ave. Village Score:All Pakistan			Total
		(Boys)	(Girls)			
II-1 Building exists	4	3.9	3.1			
II-2 Bldg. Attractive	3	1.3	1.2			
II-3 Outside Wall	3	2.2	2.2			
II-4 Veranda	3	2.0	2.2			
II-5 Floors	4	2.0	2.1			
II-6 Roof	3	1.9	2.0			
II-7 Adequacy Size	4	1.3	0.9			
II-8 Cooling System	3	0.4	0.4			
II-9 Walking distance	3	1.4	2.1			
II-10 Hazardous Areas	4	2.9	2.9			
II-11 Distracting influence	4	3.1	2.9			
II-12 Schl. Bldg. both safe	3	1.4	1.7			
II-13 Recreation Areas	4	1.4	1.1			
II-14 Window safe	4	2.4	2.3			
II-15 Good Furniture	4	1.9	2.6			
II-16 Elec. lights	4	0.7	0.8			
II-17 Toilet	4	0.5	0.7			
II-18 Piped Water	4	0.8	0.9			
II-19 Compound Clear	4	1.4	1.1			
II-20 Recreation Mat'ls	4	0.6	0.4			
II-21 School Farm	4	0.2	0.4			
II-22 Teacher Furniture	4	1.4	1.6			
II-23 Rooms sufficient	4	1.7	1.8			
II-24 Pupil furniture	4	1.3	1.6			
Total Bldg. Score	89	40.3	34.1			

III - CURRICULUM - SUMMARY FOR NATION-WIDE

Measures	D I S T R I C T S			Total
	Max.	Ave. Village	Ave. Village	
	Score Possible	Score:All Pakistan (Boys)	Score:All Pakistan (Girls)	
III-1 Blackbrd. good	6	3.2	3.5	
III-2 Bulletin Brds	6	0.6	0.4	
III-3 Reading Mat'ls	6	0.8	1.1	
III-4 Books - 6 diff.	6	2.1	1.7	
III-5 Writing Mat'ls	5	2.1	2.2	
III-6 Number Mat'ls	5	1.8	1.4	
III-7 Cleanliness taught	5	1.8	1.7	
III-8 Cleanliness-no litter	5	1.8	1.8	
III-9 3 Teaching Aids	5	1.8	1.6	
III-10 3 Homemkg. & Farming	5	2.5	1.2	
III-11 Pleasant Place	5	2.5	2.4	
III-12 Pupil Tchr. ratios	5	3.1	3.5	
III-13 Reading various sub.	5	2.7	3.9	
III-14 Writing-various Sub.	5	3.7	3.9	
III-15 Arts - " "	5	1.1	1.4	
III-16 Science local mat'ls	5	1.1	1.6	
III-17 Social Stud. local Organ	5	0.8	1.0	
III-18 Matl. Environment	5	1.7	1.8	
Total Learning Environ. Score	94	34.3	37.1	

V - COMMUNITY DEVELOPMENT

SUMMARY FOR NATION-WIDE

Measures	<u>D I S T R I C T S</u>	
	Max. Score Possible	Ave. Village Score: Pakistan
I - 1. Water System	7	3.3
2. Street System	7	2.9
3. Transport System	7	3.6
4. Drainage System	6	1.3
5. Housing	7	2.8
6. Electrical System	6	2.3
7. Clean Houses & Yards	6	2.4
8. Built a School	6	1.7
9. Built a Comm. Hall	6	0.5
10. " Place of Worship	6	5.8
11. " Health Center	6	0.9
12. " Consolidated Cemetery	6	2.6
13. Sanitary Toilets	6	1.2
14. Developed a Coop.	6	0.9
15. Community Action Mtg.	6	1.9
 Total Community Develop Score	 94	 30.5

VI - NONFORMAL EDUCATION

SUMMARY FOR NATION-WIDE

Measures	D I S T R I C T S	
	Max.	Ave. Vill.
	Score Possible	Score: Pakistan
VI-1 Koranic School	6	3.0
2 Induction Program	6	0.8
3 Authority of Family	6	2.9
4 Agric. Organization	6	0.6
5 Artisan Program	6	0.5
6 Leadership Training	6	0.6
7 Literacy Training,	6	0.9
8 School Equivalency Prog.	6	0.4
9 Organized Sports Center	6	0.4
10 Youth Clubs & Centers	6	0.4
11 Rehabilitation Programs	6	0.5
12 Village-to Village Visits	6	1.0
13 Radio or T. V. News	6	2.2
14 Newspapers	6	1.5
15 Exhibits, Films, etc.	6	1.0
16 Wall News or Bulletins	6	0.4
17 Mobile Libraries films	6	0.3
18 Visiting Teachers	6	1.2
Total Non-Formal Educ. Score. 108		15.8

VII - PERSONNEL - SUMMARY FOR NATION-WIDE

Measures	Max. Score Possible	Ave. Village Score (Boys)	Ave. Village Score (Girls)
VII -1 Level of Teacher			
Trng.	5	2.2	1.9
2 Revenue per pupil	5	0.7	0.5
3 Tchr's Live in Vill.	4	2.1	1.9
4 Monthly Reports	4	3.0	2.6
5 Testing Program	4	3.4	3.0
6 Financial Audits	4	2.5	2.3
7 Innovation	4	2.7	2.6
8 Supervision	4	3.5	2.9
9 Tchr. Consulted	4	2.6	2.2
10 Policy for Sr. Off.	4	2.6	2.1
11 Teacher Assisted	4	2.7	2.4
12 Teacher enjoys work	4	3.8	3.4
13 Teacher wants to continue	4	3.4	2.8
14 Tchr. given free hand.	4	2.5	2.6
15 Policies Available	4	2.3	2.1
16 Tchr. trained	4	2.1	2.1
17 Tchr. Oriented Com. Ldr.	4	1.5	1.3
18 Tchr. Feed Back	4	0.7	1.1
19 Teacher Finances	4	0.6	3.1
20 Release of funds reg.	4	1.5	1.1
21 Tchr. Motivation	4	2.2	1.6
22 Tchr. Transfers	4	2.8	2.6
Total Personnel Score:	90	50.8	45.2

VIII - VILLAGE MANAGEMENT - SUMMARY FOR NATION-WIDE

Measures		Max. Score Possible	Ave. Village Score
VIII-1	5 yr. plan	5	0.7
2	Plan is followed	4	0.4
3	Planning capabilities	5	1.0
4	Planning Scientific	5	0.6
5	Plan. Com. functioning.	4	0.8
6	Village Organ	5	1.5
7	Activities Coord.	4	1.2
8	Duties clear	5	2.9
9	Village Head	5	2.8
10	Village reaches out	5	1.8
11	Village Goals	5	1.3
12	Village Projects	5	1.3
13	Villagers assisted	5	1.8
14	Ldrship encourages	5	1.9
15	Budget time & money	5	1.2
16	Frequent Evaluation	5	0.9
17	Annual prog. report	5	0.8
18	Village represent	5	1.0
19	All classes represented	5	1.4
20	Outside Organization	5	0.9
21	Village Communication	5	1.7
Total V. Mgmt. Score		102	28.8

IX - PERSONAL DYNAMICS - SUMMARY FOR NATION-WIDE

Measures	Max. Score Possible	Av. Village Score: Pakistan
IX-1 Education Important	2	1.8
2 Women's Influence	4	2.8
3 Motivated to Learn	4	2.4
4 Male Parent's influence	4	2.3
5 Villager's Attitude	0	2.0
6 Reading skill	4	3.0
7 Competition & Coop.	4	2.9
8 Stick-to-it attitude	4	1.9
9 Pupil ability	4	2.2
10 Education Yes/Schl No	4	1.8
11 Gifted	5	2.7
12 Nutrition in Schl. Prog.	5	1.7
13 Rats, Vermin, etc	4	0.6
14 Polluted soil	4	1.9
15 Dispensary	4	2.1
16 Sewage	4	1.6
17 Water supply	4	1.5
18 Clothing	4	1.0
19 Adequate diet	4	0.9
20 Intestinal disease	4	1.4
21 Skin disease	4	1.7
22 Health Planning	4	1.0
23 Infant Mortality	5	3.3
24 Life Expectancy	5	1.9
25 Child Birth Totality	5	3.9
Total P. Dynamics Score	99	49.9

X - ADULT RESOURCES - SUMMARY FOR NATION-WIDE

Measures	Max. Score Possible	% in Ave. Village (Pakistan)	Number of People
X-1 Percent Illiterates		59.4	23309
2 " Less than Primary		14.4	5671
3 " Primary Completed		16.0	6307
4 " Middle Completed		5.8	2298
5 " High School "		3.7	1462
6 " Post High Schl. "		0.7	292
Total Population		100%	39339
Total Adult Res. Product (STD Score)		33	
Total Village Score	1000	349	
Gross Product of Educ. Per Capita		11.7	

APPENDIX - B
NATIONAL SUMMARY OF MATCHED PAIRS DATA
BY SEX AND CLASS

BOYS NATIONAL SUMMARY-MATCHED PAIRS (ALL CLASSES)

PERSONALITY AND FAMILY

MEASURE	CLASS II		C-III		C-IV		C-V		C-VI		C-VII		TOTAL BOYS ALL CLASSES		TOTAL GIRLS ALL CLASSES		TOTAL BOTH SEX ALL CLASSES	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
PERSONALITY																		
A-1 Sex and Age	7.1	7.4	7.6	7.0	8.9	9.0	9.7	10.6	10.4	10.8	8.7	9.0	9.3	8.7	9.0	8.8		
2 Health	7.3	4.7	7.5	5.6	7.6	5.6	8.0	5.0	5.8	4.9	7.2	5.2	7.7	5.8	7.4	5.5		
3 Intelligence	7.5	3.3	7.2	3.9	5.9	3.0	8.0	4.2	6.2	4.2	7.0	3.7	7.8	3.9	7.4	3.9		
4 Personality	6.8	4.2	7.2	4.6	7.8	2.0	7.8	4.4	7.4	4.3	7.4	3.9	6.5	4.4	7.0	4.2		
5 Peer Relations	6.7	4.2	7.4	4.6	3.8	4.7	7.3	4.6	7.3	5.0	6.5	4.6	6.6	5.4	6.6	5.0		
6 Social Class/Caste	6.7	4.1	6.7	4.9	7.5	4.8	6.9	4.2	7.1	3.2	7.0	4.2	6.5	4.9	6.8	4.6		
7 Self-Concept	6.4	3.3	6.1	3.3	6.7	3.7	7.0	3.9	7.3	4.0	6.7	3.6	6.2	3.8	6.4	3.7		
8 Income and Earnings	4.9	2.7	4.3	3.1	4.6	3.1	5.3	3.1	5.5	3.5	4.9	3.1	5.5	3.5	5.2	3.3		
9 Work Attitudes	6.9	2.7	7.3	3.7	7.2	3.5	7.6	3.6	8.0	4.1	7.4	3.5	6.8	4.2	7.1	3.8		
10 Accomplishment Points	5.8	3.1	5.6	4.4	6.7	3.2	6.5	3.2	6.9	3.7	6.3	3.5	5.7	3.8	6.0	3.6		
TOTAL PERSONALITY + Temp	66.1	39.7	66.9	45.1	66.2	42.6	74.1	46.8	71.9	47.3	67.1	44.3	68.6	48.4	65.9	46.3		

FAMILY

B-1 Education of Parents	4.0	2.0	4.1	1.8	4.5	1.7	4.8	2.8	5.5	3.2	4.6	2.3	4.3	2.5	4.4	2.4		
2 Parent Value of Educ.	5.7	2.6	5.4	2.7	5.6	2.4	5.5	2.7	5.5	3.4	5.6	2.8	5.2	2.4	5.4	2.6		
3 Family size	5.1	4.1	5.5	4.2	5.1	3.8	5.6	4.5	5.0	4.5	5.2	4.2	5.3	4.6	5.2	4.4		
4 Family relationship	7.7	5.1	7.9	5.1	8.0	5.0	7.8	4.8	6.9	4.6	7.6	5.0	7.5	6.5	7.6	5.8		
5 Family need for income	6.1	4.1	5.8	3.9	5.9	4.1	6.1	3.9	5.3	3.6	5.8	3.9	6.3	5.3	6.0	4.6		
6 " need for child labor	6.3	4.0	5.4	3.5	4.0	3.4	6.4	3.4	6.2	3.0	5.6	3.4	5.8	4.9	5.7	4.2		
7 Attitude on family size	5.2	3.8	5.0	4.5	5.4	3.3	5.6	4.4	5.2	4.1	5.2	4.0	5.6	4.4	5.4	4.2		
8 Family stability	7.9	7.0	7.2	6.2	7.6	5.9	7.8	6.5	7.5	6.4	7.6	6.4	8.0	7.2	7.8	6.8		
9 Family problems	7.1	5.9	6.8	5.9	7.1	5.7	7.3	5.5	6.5	4.6	6.9	5.5	6.6	4.7	6.8	5.2		
TOTAL FAMILY FACTORS	55.1	35.6	53.1	37.8	52.2	35.3	56.9	38.5	52.6	37.4	54.1	37.5	52.6	40.7	52.3	40.2		

BOYS NATIONAL SUMMARY-MATCHED PAIRS (ALL CLASSES)

SCHOOL AND SKILLS

MEASURE	CLASS II		C-III		C-IV		C-V		C-VI		TOTAL BOYS ALL CLASSES		TOTAL GIRLS ALL CLASSES		TOTAL BOTH SEX ALL CLASSES	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
School																
1 Feeling about self	8.6	3.1	8.6	3.0	8.3	2.8	8.4	3.3	8.2	2.9	8.4	3.0	7.8	3.7	8.1	3.4
2 Class Relations	7.4	3.8	8.0	4.4	7.8	3.2	8.1	4.3	7.5	4.2	7.7	4.0	8.3	3.4	8.0	3.7
3 Attendance Record	8.4	2.6	8.3	2.8	8.5	2.3	8.4	2.6	7.5	2.3	8.2	2.5	8.4	2.9	8.3	2.7
4 Achievement Record	7.6	2.5	8.4	3.1	8.0	2.6	8.1	2.9	7.4	3.7	7.9	2.9	7.0	3.0	7.4	2.7
5 Education Aspiration	5.6	2.9	8.1	3.6	8.2	2.8	8.2	2.8	7.8	2.3	7.6	2.8	7.6	3.6	7.6	3.2
6 Distance to School	7.9	6.7	8.1	6.4	7.6	5.8	7.4	5.7	7.5	4.6	7.7	5.8	7.4	5.5	7.6	5.6
7 Relationship to School	7.4	4.0	7.4	4.6	7.5	3.3	7.6	4.8	7.3	5.0	7.4	4.3	7.2	4.8	7.3	4.6
8 Treatment/Discipline	7.8	4.3	7.5	4.3	8.3	3.8	8.4	4.0	8.2	4.3	8.0	4.1	8.2	4.7	8.1	4.4
9 Knowledge of Pol. Science	3.4	1.8	4.1	2.0	4.0	2.0	4.2	2.7	6.6	3.4	4.4	2.4	4.4	2.0	4.4	2.2
10 Political Views	2.9	1.6	3.3	1.9	3.1	1.8	3.4	2.3	6.0	3.2	3.8	2.2	3.8	2.7	3.8	2.4
TOTAL School Factors	12.8	33.3	91.8	36.1	71.3	20.4	72.2	35.6	74.0	35.9	71.1	34.0	70.1	36.3	70.6	35.1
SKILLS																
1 Reads Urdu	5.8	1.9	9.1	1.7	8.3	3.2	8.4	2.8	8.7	3.9	8.0	2.7	7.4	3.4	7.7	3.1
2 Reads Arabic	3.2	1.1	6.8	2.4	5.3	2.0	5.7	2.6	7.5	3.4	5.7	2.3	4.4	2.7	5.0	2.5
3 Can Read	6.2	2.2	8.6	2.7	8.7	3.7	8.3	3.6	7.5	3.7	7.8	3.2	5.8	4.2	6.8	3.7
4 Can Subtract	5.4	2.1	6.8	3.0	8.4	3.9	8.4	3.7	7.6	3.3	7.3	3.2	7.4	3.7	7.4	3.4
5 Can Multiply	5.2	1.7	6.6	2.0	8.0	3.3	8.2	3.0	7.5	2.9	7.1	2.6	7.0	2.8	7.0	2.7
6 Can Divide	3.9	1.4	5.9	1.8	7.8	2.8	8.4	3.3	7.0	2.9	6.6	2.4	6.2	2.2	6.4	2.3
7 Writes Urdu	4.2	1.7	5.1	1.6	7.1	2.5	8.1	2.5	7.4	3.0	6.4	2.2	5.8	2.4	6.1	2.3
8 Fix it Skills	3.0	2.9	3.2	1.1	3.5	2.0	4.5	2.7	5.0	2.6	3.8	2.2	4.7	2.4	4.2	2.3
9 Know How, Where, When	1.8	1.2	1.3	0.8	1.4	0.9	2.2	1.0	3.0	1.3	1.9	1.0	4.1	2.8	3.0	1.9
10 Talents	0.6	1.0	1.8	1.1	1.8	1.1	1.7	1.3	3.7	2.6	1.9	1.4	3.4	2.1	2.6	1.8
TOTAL SKILLS FACTORS	55.3	17.2	55.2	18.2	60.3	25.4	63.9	26.5	64.9	29.6	56.5	23.2	56.2	25.7	56.2	25.9
GRAND TOTAL: ALL FACTORS																
	128.8	33.3	91.8	36.1	71.3	20.4	72.2	35.6	74.0	35.9	71.1	34.0	70.1	36.3	70.6	35.1

GIRLS NATIONAL SUMMARY - MATCHED PAIRS (ALL CLASSES)

PERSONALITY AND FAMILY

MEASURE	CLASS II		C. III		C. IV		C. V		C. VI		TOTAL GIRLS ALL CLASSES			
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
PERSONALITY														
A-1 Sex and Age	7.0	6.5	8.4	8.6	9.7	9.3	10.3	8.6	11.1	10.6	9.3	8.7		
2 Health	7.7	5.7	7.8	6.2	8.3	5.7	6.9	4.6	7.8	7.0	7.7	5.8		
3 Intelligence	6.7	7.7	7.1	4.1	7.6	3.9	7.6	4.0	9.8	3.7	7.8	3.9		
4 Personality	6.0	4.3	6.0	4.5	7.5	4.5	6.7	4.3	6.4	4.3	6.5	4.4		
5 Pers. Relations	5.8	4.3	6.3	5.2	6.9	5.4	6.5	5.2	7.4	7.1	6.6	5.4		
6 Social Class/Caste	5.8	4.3	5.9	4.5	6.5	5.7	6.5	4.1	7.6	5.9	6.5	4.9		
7 Self-Concept	5.5	3.4	5.5	2.7	6.0	4.4	6.6	3.6	7.2	4.9	6.2	3.8		
8 Innet Earnings	4.8	3.6	5.0	3.9	5.9	3.5	5.4	3.6	6.4	2.9	5.5	3.5		
9 Work Attitudes	6.7	3.7	7.3	4.3	6.9	4.3	5.9	3.8	7.2	5.1	6.8	4.2		
10 Accomplishment	4.9	3.3	5.2	3.9	6.2	3.7	5.6	3.4	6.6	4.6	5.7	3.8		
TOTAL PERSONALITY & Temp	60.9	42.8	64.5	47.9	71.5	49.9	62.0	44.3	77.5	56.3	68.6	48.4		

FAMILY														
B-1 Educ. of Parents	3.4	1.9	4.5	2.3	3.8	2.3	4.4	2.0	5.3	4.1	4.3	2.5		
2 Parent Value of Educ.	4.0	2.3	5.3	1.7	5.7	2.9	5.6	2.7	5.5	2.2	5.2	2.4		
3 Family size	5.4	4.0	5.8	5.1	5.6	4.8	4.9	4.2	4.8	4.8	5.3	4.6		
4 Family relationship	6.9	5.8	7.4	7.6	8.5	7.5	7.9	6.4	6.9	5.1	7.5	6.5		
5 Family need for	6.2	4.5	6.1	6.3	7.3	6.2	6.9	5.1	5.4	4.2	6.3	5.3		
6 " need for child labor	6.5	4.2	6.4	5.6	6.0	5.5	5.4	4.8	4.9	4.3	5.8	4.9		
7 Attitude on family inc.	5.5	3.8	5.9	5.2	6.1	5.3	5.5	4.6	5.1	2.9	5.6	4.4		
8 Family stability	7.9	6.4	8.4	8.4	8.3	8.2	7.5	6.7	7.9	6.5	8.0	7.2		
9 Family Problems	6.9	4.4	7.1	5.1	6.8	5.4	5.7	4.7	6.5	5.1	6.6	4.9		
TOTAL FAMILY FACTORS	52.9	37.3	56.9	47.3	58.1	48.1	53.3	41.2	52.3	39.2	54.6	42.7		

GIRLS NATIONAL SUMMARY - MATCHED PAIRS (ALL CLASSES)

SCHOOL AND SKILLS

MEASURE	Class II		C III		C IV		C V		C VI		TOTAL GIRLS All classes		
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	OUT
School													
C-1 Feeling about Schl.	6.8	3.3	7.8	4.1	8.4	3.5	7.8	3.7	8.1	4.2	7.8	3.7	
2 Class Retardation	8.4	2.7	8.4	4.0	8.5	3.1	8.5	3.4	7.8	4.0	8.3	3.4	
3 Attendance Record	8.4	2.1	8.1	3.4	8.5	2.9	8.6	2.6	8.7	3.8	8.4	2.9	
4 Achievement Record	6.5	2.3	6.6	2.8	6.9	3.1	7.1	3.1	7.9	4.0	7.0	3.0	
5 Education Aspiration	7.6	2.8	7.7	3.7	7.9	3.9	7.8	3.4	7.2	4.1	7.6	3.6	
6 Distance to Schl.	7.8	4.9	7.7	6.5	7.9	7.0	7.0	5.2	6.9	3.8	7.4	5.5	
7 Relationship to Schl.	7.4	3.7	7.4	4.3	7.6	4.4	7.3	4.1	6.4	7.5	7.2	4.8	
8 Treatment / Discipline	8.0	3.7	8.4	5.3	8.2	5.2	8.2	4.4	8.2	4.9	8.2	4.7	
9 Knowledge of Pl. Issues	4.0	1.9	4.2	2.2	3.9	2.3	4.4	2.4	5.4	1.6	4.4	2.0	
10 Political Views	3.3	2.6	3.7	2.0	3.2	2.1	3.8	2.3	5.2	4.5	3.8	2.7	
TOTAL SCHOOL FACTORS	68.2	30.0	70.0	38.3	71.0	37.5	70.5	34.6	71.8	42.4	70.1	36.3	

SKILLS

D-1 Reads Urdu	6.0	1.5	7.5	2.1	7.0	7.3	8.4	3.8	8.5	2.5	7.4	3.4	
2 Reads Arabic	3.0	1.6	3.7	2.5	5.8	3.4	5.3	3.1	4.3	2.9	4.4	2.7	
3 Can Read	4.9	2.7	6.6	3.9	2.4	5.6	7.1	5.9	7.9	2.7	5.8	4.2	
4 Can Subtract	5.0	2.2	6.1	4.2	8.3	5.3	9.9	4.2	7.8	2.8	7.4	3.7	
5 Can Multiply	3.2	1.2	6.6	2.9	7.7	4.3	7.7	3.8	10.0	2.0	7.0	2.8	
6 Can Divide	2.8	1.2	5.8	1.4	7.9	3.6	7.4	3.0	7.1	2.0	6.2	2.2	
7 Writes Urdu	4.4	1.4	4.6	2.3	6.1	3.7	6.0	2.3	8.0	2.4	5.8	2.4	
8 Fix-it Skills	2.8	1.4	4.1	1.8	4.2	2.5	6.1	2.9	6.3	3.8	4.7	2.4	
9 Knot, Sew, Weave	2.4	1.4	3.7	2.3	3.6	2.8	5.1	3.3	5.7	4.3	4.1	2.8	
10 Talents	1.7	1.0	1.9	1.3	5.5	2.9	3.8	2.6	3.9	2.8	3.4	2.1	
TOTAL SKILLS FACTORS	26.2	15.6	50.6	24.7	58.5	41.4	66.8	34.9	69.5	28.2	56.2	28.7	

GRAND TOTAL: ALL FACTORS 218.0 242.0 259.1 258.6 271.1 249.5
 125.7 158.2 176.9 155.0 166.1 158.1
 130